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11/23/80  
Bopt

SAMPLE	SAM. WT.		%-COPPER	%-ANTIMONY	%-ARSENIC
Q219A	7086.000		0.00372	1.54107	0.34063
Q219B	8077.000	<	0.00172	1.59457	0.35817
Q219C	7587.000		0.00557	1.67864	0.37629
Q219D	6560.000		0.00559	1.81933	0.41418
Q219E	7012.000		0.00398	1.54413	0.33584
Q219F	6982.000	<	0.00194	1.64086	0.35625
Q219G	8826.000		0.00381	1.81724	0.40243
Q219H	7162.000	<	0.00207	1.78046	0.39979
Q219I	7652.000		0.00252	1.78221	0.39701
Q219J	6574.000		0.00724	1.76917	0.41492
Q219K	7439.000		0.00407	1.64163	0.37610
Q219L	7719.000		0.00340	1.78589	0.41102
Q219M	8012.000		0.00613	1.90461	0.44498
Q219N	7665.000	<	0.00198	1.57969	0.35440
Q219O	8901.000		0.00514	1.81542	0.40572
Q219P	7884.000		0.00309	1.65024	0.36068
Q219Q	8199.000		0.00393	1.59695	0.36912
Q219R	6988.000	<	0.00214	1.65282	0.37664
Q219S	6663.000		0.00309	1.52336	0.35088
Q219T	7018.000	<	0.00204	1.57433	0.36210
			0.00438 AVG	1.68463 AVG	0.38036 AVG
			0.002116 SD	0.114401 SD	0.029300 SD
			48.337547 %RSD	6.790895 %RSD	7.703262 %RSD

Q220A	7119.000		0.01111	0.81837	0.22797
Q220B	9067.000		0.01146	0.69431	0.19818
Q220C	7711.000		0.01019	0.60629	0.17128
Q220D	5821.000		0.01220	0.59921	0.17479
Q220E	10054.000		0.01251	0.69452	0.20699
Q220F	6439.000	<	0.00435	5.27403	1.44768
Q220G	7362.000		0.01243	0.75657	0.21796
Q220H	9903.000		0.01125	0.66991	0.18167
Q220I	7253.000		0.00973	0.63480	0.18289
Q220J	7705.000		0.01309	0.67520	0.19309
Q220K	7043.000		0.02747	5.50303	1.61534
Q220L	6656.000		0.01123	0.70875	0.18129
Q220M	7881.000		0.01207	0.70096	0.20687
Q220N	6979.000		0.01347	1.00578	0.28566
Q220O	8125.000		0.01112	0.60094	0.17542
Q220P	8996.000		0.02135	5.16905	1.55901
Q220Q	8327.000		0.01099	0.84879	0.24612
Q220R	7967.000		0.01258	0.73581	0.20443
Q220S	8139.000		0.01083	0.71750	0.19805
Q220T	11369.000		0.01160	0.66456	0.19019
			0.01298 AVG	1.40392 AVG	0.40324 AVG
			0.004720 SD	1.689342 SD	0.491748 SD
			36.351048 %RSD	120.330452 %RSD	121.947929 %RSD

Q221A	14729.000		0.01314	4.55122	1.34940
Q221B	9445.000		0.01279	1.06708	0.30191
Q221C	9836.000		0.01390	0.63592	0.17598
Q221D	11009.000		0.01246	0.62888	0.16545
Q221E	11477.000		0.01721	1.70990	0.48326
Q221F	11403.000		0.01394	1.08977	0.31708
Q221G	11900.000		0.01100	0.63279	0.17926
Q221H	11984.000		0.00992	0.67673	0.19213
Q221I	14558.000		0.01317	1.13576	0.32236
Q221J	12918.000		0.01288	0.60506	0.17006



Q221K	12496.000	0.01267	0.73889	0.20099
Q221L	14801.000	0.01013	0.56575	0.15503
Q221M	9552.000	0.01010	0.63003	0.17968
Q221N	9932.000	0.01008	0.66257	0.19205
Q221O	15000.000	0.01362	0.60364	0.16960
Q221P	9436.000	0.01128	0.68019	0.18347
Q221Q	11910.000	0.01283	0.68321	0.19892
Q221R	9925.000	0.01318	0.93357	0.26373
Q221S	12933.000	0.01228	0.61889	0.17948
Q221T	10789.000	0.01326	0.65966	0.17781

0.01249 AVG	0.97579 AVG	0.27792 AVG
0.001740 SD	0.086389 SD	0.264651 SD
13.926498 %RSD	90.837997 %RSD	95.224907 %RSD

S626A	17425.000	0.07890	0.71258	0.00597
S626B	17553.000	0.07540	0.70899	0.00477
S626C	13948.000	0.08013	0.74289	0.00494

0.07815 AVG	0.72149 AVG	0.00522 AVG
0.002452 SD	0.018624 SD	0.000649 SD
3.138153 %RSD	2.581390 %RSD	12.428221 %RSD

S604A	15259.000	0.00656	1.66748	0.09751
S604B	13012.000	0.00661	1.61165	0.09704
S604C	11960.000	0.00648	1.76824	0.10718

0.00655 AVG	1.68246 AVG	0.10057 AVG
0.000068 SD	0.079363 SD	0.005722 SD
1.038023 %RSD	4.717062 %RSD	5.689143 %RSD

(TI)TITLE:

91119065 QY RF

(LN)LIBRARY:

(SA)SAMPLE TIME: 13DEC79 1128:00

(SE)STD ENERGY TOLERANCE: 2.00

(UE)UNK ENERGY TOLERANCE: 2.00

(TF)THERMAL FLUX: 0.0000E-01

(EF)EPITHERMAL FLUX: 0.0000E-01

(FF)FAST FLUX: 0.0000E-01

(QU)UNITS:

	ELEMENT	ENERGY	HALF-LIFE	SEC
1	%-COPPER	511.00	1.2800E 01 H	4.6080E 04
2	%-ANTIMONY	564.09	2.7200E 00 D	2.3501E 05
3	%-ARSENIC	657.41	2.6300E 01 H	9.4680E 04

## STANDARD SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626A	17425.00	FBI1 .A01	100.0	100000.0
2	S626B	17553.00	FBI1 .A02	100.0	100000.0
3	S626C	13948.00	FBI1 .A03	100.0	100000.0
4	S604A	15259.00	FBI1 .A04	100.0	100000.0
5	S604B	13012.00	FBI1 .A05	100.0	100000.0
6	S604C	11960.00	FBI1 .A06	100.0	100000.0

STD: 1 S626A FILE= FBI1 .A01

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.0000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 2 S626B FILE= FBI1 .A02

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.0000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 3 S626C FILE= FBI1 .A03

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.0000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 4 S604A FILE= FBI1 .A04

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 5 S604B FILE= FBI1 .A05

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 6 S604C

FILE= FBI1 .R06

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

# UNKNOWN SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	Q219A	7086.00	FBI1 .R07	100.0	100000.0
2	Q219B	8077.00	FBI1 .R08	100.0	100000.0
3	Q219C	7587.00	FBI1 .R09	100.0	100000.0
4	Q219D	6560.00	FBI1 .R10	100.0	100000.0
5	Q219E	7012.00	FBI1 .R11	100.0	100000.0
6	Q219F	6982.00	FBI1 .R12	100.0	100000.0
7	Q219G	8826.00	FBI1 .R13	100.0	100000.0
8	Q219H	7162.00	FBI1 .R14	100.0	100000.0
9	Q219I	7652.00	FBI1 .R15	100.0	100000.0
10	Q219J	6574.00	FBI1 .R16	100.0	100000.0
11	Q219K	7439.00	FBI1 .R17	100.0	100000.0
12	Q219L	7719.00	FBI1 .R18	100.0	100000.0
13	Q219M	8012.00	FBI1 .R19	100.0	100000.0
14	Q219N	7665.00	FBI1 .R20	100.0	100000.0
15	Q219O	8901.00	FBI1 .R21	100.0	100000.0
16	Q219P	7084.00	FBI1 .R22	100.0	100000.0
17	Q219Q	8199.00	FBI1 .R23	100.0	100000.0
18	Q219R	6988.00	FBI1 .R24	100.0	100000.0
19	Q219S	6663.00	FBI1 .R66	100.0	100000.0
20	Q219T	7018.00	FBI1 .R25	100.0	100000.0
21	Q220A	7119.00	FBI1 .R26	100.0	100000.0
22	Q220B	9067.00	FBI1 .R27	100.0	100000.0
23	Q220C	7711.00	FBI1 .R28	100.0	100000.0
24	Q220D	5821.00	FBI1 .R29	100.0	100000.0
25	Q220E	10054.00	FBI1 .R30	100.0	100000.0
26	Q220F	6439.00	FBI1 .R31	100.0	100000.0
27	Q220G	7362.00	FBI1 .R32	100.0	100000.0
28	Q220H	9903.00	FBI1 .R33	100.0	100000.0
29	Q220I	7253.00	FBI1 .R34	100.0	100000.0
30	Q220J	7705.00	FBI1 .R35	100.0	100000.0
31	Q220K	7043.00	FBI1 .R36	100.0	100000.0
32	Q220L	6656.00	FBI1 .R37	100.0	100000.0
33	Q220M	7881.00	FBI1 .R38	100.0	100000.0
34	Q220N	6979.00	FBI1 .R39	100.0	100000.0
35	Q220O	8125.00	FBI1 .R65	100.0	100000.0
36	Q220P	8996.00	FBI1 .R40	100.0	100000.0
37	Q220Q	8327.00	FBI1 .R41	100.0	100000.0
38	Q220R	7967.00	FBI1 .R42	100.0	100000.0
39	Q220S	8139.00	FBI1 .R43	100.0	100000.0
40	Q220T	11369.00	FBI1 .R44	100.0	100000.0
41	Q221A	14729.00	FBI1 .R45	100.0	100000.0
42	Q221B	9445.00	FBI1 .R46	100.0	100000.0
43	Q221C	9836.00	FBI1 .R47	100.0	100000.0
44	Q221D	11009.00	FBI1 .R48	100.0	100000.0
45	Q221E	11477.00	FBI1 .R49	100.0	100000.0
46	Q221F	11403.00	FBI1 .R50	100.0	100000.0
47	Q221G	11900.00	FBI1 .R51	100.0	100000.0
48	Q221H	11984.00	FBI1 .R52	100.0	100000.0
49	Q221I	14550.00	FBI1 .R53	100.0	100000.0

50	Q221J	12918.00	FBI1	. A54	100.0	100000.0
51	Q221K	12496.00	FBI1	. A55	100.0	100000.0
52	Q221L	14091.00	FBI1	. A56	100.0	100000.0
53	Q221M	9552.00	FBI1	. A57	100.0	100000.0
54	Q221N	9932.00	FBI1	. A58	100.0	100000.0
55	Q221O	15000.00	FBI1	. A59	100.0	100000.0
56	Q221P	9436.00	FBI1	. A60	100.0	100000.0
57	Q221Q	11910.00	FBI1	. A61	100.0	100000.0
58	Q221R	9925.00	FBI1	. A62	100.0	100000.0
59	Q221S	12933.00	FBI1	. A63	100.0	100000.0
60	Q221T	10789.00	FBI1	. A64	100.0	100000.0
61	S626A	17425.00	FBI1	. A01	100.0	100000.0
62	S626B	17553.00	FBI1	. A02	100.0	100000.0
63	S626C	13940.00	FBI1	. A03	100.0	100000.0
64	S604A	15259.00	FBI1	. A04	100.0	100000.0
65	S604B	13012.00	FBI1	. A05	100.0	100000.0
66	S604C	11960.00	FBI1	. A06	100.0	100000.0

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\*\*\*\*\* 14 DEC 1979 9:25:56 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00

SAMPLE IDENTIFICATION: 5626A

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 17425.00

UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 14DEC79 208:28 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.10	13742.	4338.	3.10	1022.60	1011.	37	2.290E 01	1.1	3.06E 00
2	1	564.22	89943.	3231.	2.27	1128.77	1120	18	1.499E 02	0.3	6.04E 01
3	1	602.85	2645.	630.	2.20	1205.97	1197	26	4.409E 00	2.4	1.06E 00
4	1	646.01	200.	284.	2.10	1292.22	1286	18	3.466E-01	13.4	1.47E 00
5	1	657.30	127.	162.	2.61	1314.78	1309	12	2.122E-01	16.7	1.05E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	13742.	7.8000E-02	0.0000E-01	3.7470E-02	4.0025E-04
%-ANTIMONY	564.1	89943.	7.2000E-01	0.0000E-01	1.3975E-02	4.8244E-05
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

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\*\*\*\*\* 14 DEC 1979 9:27:04 AM \*\*\*\*\*  
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91119065 QV RF

SAMPLE DATE: 13DEC79 1128:00  
SAMPLE IDENTIFICATION: S626B  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 17553.00 UNITS:  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

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\*  
ACQUISITION DATE: 14DEC79 218:54 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	511.11	13106.	3704.	3.04	1022.63	1011	32	2.184E 01	1.1	3.83E 00
2	1	564.23	89981.	3245.	2.28	1128.79	1121	18	1.500E 02	0.3	8.06E 01
3	1	602.90	2929.	441.	2.30	1206.07	1196	18	4.881E 00	2.1	1.99E 00
4	1	645.84	216.	302.	2.42	1291.89	1284	17	3.597E-01	13.3	1.49E 00
5	1	657.20	102.	149.	2.65	1314.58	1311	11	1.700E-01	19.6	1.93E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	13106.	7.8000E-02	0.0000E-01	3.5810E-02	3.9134E-04
%-ANTIMONY	564.1	89981.	7.2000E-01	0.0000E-01	1.3905E-02	4.7996E-05
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

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 \*\*\*\*\* 14 DEC 1979 9:28:11 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: S626C  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 13948.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TRB1

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 \*  
 ACQUISITION DATE: 14DEC79 229:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.11	10964.	2184.	3.06	1022.62	1011	24	1.827E 01	1.1	3.25E 00
2	9	559.81	1102.	377.	1.34	1119.96	1108	36	1.837E 00	3.9	4.04E 01
3	9	564.23	74782.	463.	2.30	1128.79	1108	36	1.246E 02	0.4	
4	1	602.92	2217.	1240.	2.22	1206.11	1194	57	3.696E 00	3.1	3.70E 00
5	1	657.38	84.	145.	2.04	1314.95	1311	10	1.393E-01	23.1	3.96E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	10964.	7.8000E-02	0.0000E-01	3.8055E-02	4.2979E-04
Z-ANTIMONY	564.1	74782.	7.2000E-01	0.0000E-01	1.4570E-02	5.3607E-05
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

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\*\*\*\*\* 14 DEC 1979 9:29:16 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
SAMPLE IDENTIFICATION: S604A  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 15259.00 UNITS:  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

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\*  
ACQUISITION DATE: 14DEC79 239:43 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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\*  
DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.02	972.	3480.	3.19	1022.45	1014	16	1.620E 00	9.2	9.70E-01
2	2	559.27	17723.	1941.	2.39	1118.88	1108	35	2.954E 01	0.8	3.86E 01
3	2	564.19	183289.	1356.	2.30	1128.70	1108	35	3.055E 02	0.2	
4	1	602.87	5604.	1022.	2.28	1206.02	1198	18	9.340E 00	1.6	8.56E-01
5	1	645.91	430.	765.	2.40	1292.02	1284	18	7.163E-01	10.3	1.77E 00
6	1	657.26	1797.	778.	2.20	1314.71	1307	17	2.995E 00	3.2	9.21E-01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	1797.	1.0000E-01	0.0000E-01	2.9359E-03	9.4599E-05



\*\*\*\*\*  
\*\*\*\*\* 14 DEC 1979 9:30:20 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00

SAMPLE IDENTIFICATION: S604B

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 13012.00

UNITS:

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 14DEC79 250:22 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GELI-8 \* LIBRARY: NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	510.95	828.	2576.	2.99	1022.31	1017	14	1.381E 00	9.3	1.39E 00
2	2	559.25	15242.	1484.	2.49	1118.84	1107	33	2.540E 01	0.9	4.18E 01
3	2	564.19	150782.	1011.	2.29	1128.71	1107	33	2.513E 02	0.3	
4	1	602.86	4538.	820.	2.25	1205.98	1199	17	7.563E 00	1.7	9.59E-01
5	1	645.95	407.	556.	3.16	1292.09	1283	19	6.781E-01	9.6	1.45E 00
6	1	657.24	1518.	595.	2.36	1314.67	1305	20	2.530E 00	3.4	6.06E-01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	1518.	1.0000E-01	0.0000E-01	2.9219E-03	1.0017E-04

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:31:28 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: S604C  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 11960.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 300:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	510.89	739.	2758.	3.03	1022.18	1016	14	1.231E 00	10.7	1.22E 00
2	2	559.27	15319.	1539.	2.48	1118.87	1107	36	2.553E 01	0.9	3.36E 01
3	2	564.19	151773.	1039.	2.28	1128.71	1107	36	2.530E 02	0.3	
4	1	602.86	4682.	1360.	2.35	1206.00	1195	32	7.004E 00	1.8	2.98E 00
5	1	645.96	425.	522.	2.63	1292.13	1283	18	7.076E-01	9.0	1.41E 00
6	1	657.24	1534.	646.	2.37	1314.66	1308	19	2.556E 00	3.5	2.07E 00
7	1	665.64	136.	343.	2.56	1331.46	1327	10	2.266E-01	21.1	2.23E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	1534.	1.0000E-01	0.0000E-01	3.2271E-03	1.1184E-04

# SUMMARY OF STANDARD CONSTANTS:

## 1. ELEMENT %-COPPER AT 511.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.8000E-02	3.7470E-02	4.0825E-04
S626B	7.8000E-02	3.5810E-02	3.9134E-04
S626C	7.8000E-02	3.8055E-02	4.2979E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	3.7043E-02	2.3608E-04

## 2. ELEMENT %-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.2000E-01	1.3975E-02	4.8244E-05
S626B	7.2000E-01	1.3905E-02	4.7996E-05
S626C	7.2000E-01	1.4570E-02	5.3607E-05
<hr/>			
MEAN CONSTANT,	3 STDS:	1.4121E-02	2.8727E-05

## 3. ELEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604A	1.0000E-01	2.9359E-03	9.4599E-05
S604B	1.0000E-01	2.9219E-03	1.0017E-04
S604C	1.0000E-01	3.2271E-03	1.1184E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	3.0110E-03	5.8586E-05

\*\*\*\*\* 14 DEC 1979 9:33:00 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7006.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1537:36 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	2216.	465.	0.0037	0.0006	15.1
%-ANTIMONY	564.1	1163.	88442.	1.5411	0.0061	0.4
%-ARSENIC	657.1	608.	3899.	0.3406	0.0091	2.7

1009:	162.	147.	129.	137.	129.	145.	136.	130.	166.
1018:	151.	182.	173.	200.	219.	215.	198.	177.	159.
1027:	151.	145.	143.	148.	130.	128.	122.	107.	142.
1117:	5479.	6673.	6615.	5559.	3543.	1761.	1026.	1445.	3984.
1126:	8614.	13996.	17079.	16599.	13379.	8248.	3545.	949.	233.
1135:	94.	73.	82.	58.	71.	61.	83.	70.	64.
1301:	34.	40.	32.	37.	33.	31.	48.	42.	54.
1310:	111.	245.	435.	644.	794.	748.	555.	362.	194.
1319:	64.	38.	38.	23.	33.	25.	31.	40.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.027

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.84	478.	2276.	2.89	1022.10	1013	16	7.963E-01	15.0
2	2	559.10	35525.	1618.	2.40	1118.54	1109	32	5.921E 01	0.6
3	2	564.06	90832.	1194.	2.39	1128.45	1109	32	1.514E 02	0.3
4	1	602.75	2493.	819.	2.38	1205.77	1196	22	4.156E 00	2.6
5	1	645.70	201.	321.	2.02	1291.60	1287	10	3.346E-01	14.7
6	1	657.06	4004.	624.	2.43	1314.31	1305	19	6.674E 00	1.8
7	1	665.67	297.	449.	3.04	1331.52	1324	14	4.947E-01	11.8

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:34:08 AM \*\*\*\*\*  
 \*\*\*\*\*

911.19065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8077.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1548:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	2669.	0. <	0.0017	NOT DETECTABLE	
Z-ANTIMONY	564.1	1158.	104116.	1.5946	0.0060	0.4
Z-ARSENIC	657.1	665.	4652.	0.3582	0.0092	2.6

1009:	183.	192.	166.	184.	168.	171.	145.	171.	204.
1018:	193.	221.	230.	210.	216.	244.	227.	212.	177.
1027:	186.	178.	157.	161.	174.	150.	150.	163.	174.
1117:	6478.	7978.	8038.	6694.	4381.	2116.	1174.	1754.	4546.
1126:	10298.	16341.	19880.	19712.	15677.	9765.	4092.	1198.	305.
1135:	91.	90.	82.	80.	88.	77.	93.	78.	96.
1301:	40.	49.	59.	33.	38.	52.	47.	48.	59.
1310:	119.	264.	529.	766.	894.	909.	688.	444.	207.
1319:	82.	36.	36.	48.	29.	40.	38.	37.	35.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.032

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.11	43459.	1568.	2.42	1118.56	1107	33	7.243E 01	0.5
2	2	564.06	107466.	1195.	2.40	1128.45	1107	33	1.791E 02	0.3
3	1	602.77	2909.	878.	2.35	1205.82	1197	19	4.849E 00	2.4
4	1	645.73	211.	850.	2.91	1291.67	1285	18	3.513E-01	21.1
5	1	657.08	4801.	686.	2.44	1314.35	1305	19	8.002E 00	1.7
6	1	665.17	426.	473.	3.96	1330.52	1324	14	7.100E-01	8.8

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:35:17 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7587.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1558:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	2486.	732.	0.0056	0.0006	10.3
%-ANTIMONY	564.1	1132.	102765.	1.6786	0.0063	0.4
%-ARSENIC	657.1	714.	4569.	0.3763	0.0097	2.6

1009:	176.	160.	164.	168.	154.	185.	165.	175.	162.
1018:	220.	193.	209.	251.	270.	230.	221.	237.	195.
1027:	174.	165.	155.	158.	153.	165.	174.	177.	153.
1117:	6323.	7790.	7818.	6381.	4160.	2202.	1188.	1740.	4461.
1126:	9983.	16321.	19779.	19282.	15513.	9594.	4163.	1238.	289.
1135:	107.	96.	70.	81.	67.	87.	76.	101.	103.
1301:	37.	45.	26.	34.	51.	52.	53.	38.	56.
1310:	128.	275.	535.	756.	868.	888.	650.	419.	199.
1319:	76.	37.	27.	30.	24.	30.	37.	41.	43.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.030

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.90	755.	2562.	3.96	1022.20	1015	15	1.258E 00	10.3
2	2	559.10	42357.	1495.	2.44	1118.54	1107	34	7.059E 01	0.5
3	2	564.06	105895.	1167.	2.39	1128.45	1107	34	1.765E 02	0.3
4	1	571.34	128.	682.	2.12	1142.99	1140	9	2.133E-01	30.6
5	1	602.70	2890.	835.	2.43	1205.66	1196	20	4.816E 00	2.4
6	1	657.06	4709.	736.	2.46	1314.30	1302	21	7.848E 00	1.7
7	1	665.46	352.	515.	2.42	1331.09	1323	16	5.864E-01	10.7

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:36:28 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6560.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1609:07 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	2428.	629.	0.0056	0.0007	11.8
%-ANTIMONY	564.1	1150.	96123.	1.8193	0.0070	0.4
%-ARSENIC	657.0	266.	4329.	0.4142	0.0105	2.5

1009:	162.	145.	173.	169.	155.	154.	163.	187.	177.
1010:	181.	196.	207.	268.	251.	226.	211.	197.	188.
1027:	147.	161.	148.	150.	152.	148.	160.	145.	148.
1117:	6162.	7520.	7375.	6175.	3895.	2022.	1120.	1711.	4238.
1126:	9416.	15340.	18230.	17723.	14489.	9001.	3944.	1160.	248.
1135:	109.	88.	78.	60.	69.	78.	85.	85.	76.
1301:	50.	39.	38.	35.	31.	50.	48.	47.	56.
1310:	102.	280.	506.	716.	845.	813.	605.	388.	196.
1319:	79.	41.	38.	23.	33.	39.	35.	37.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.029

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.75	647.	2498.	2.94	1021.90	1014	16	1.079E 00	11.8
2	2	559.09	40255.	1527.	2.42	1118.51	1107	34	6.709E 01	0.5
3	2	564.06	98885.	1183.	2.42	1128.44	1107	34	1.648E 02	0.3
4	1	602.71	2602.	700.	2.38	1205.69	1198	16	4.336E 00	2.5
5	3	646.13	283.	380.	3.08	1292.46	1285	38	4.721E-01	11.6
6	3	657.03	4453.	274.	2.47	1314.26	1285	38	7.422E 00	1.6
7	1	665.20	285.	580.	2.20	1330.58	1323	16	4.758E-01	13.5

\*\*\*\*\*  
\*\*\*\*\* 14 DEC 1979 9:37:37 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
SAMPLE IDENTIFICATION: Q219E  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 7012.000 UNITS:  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 13DEC79 1619:37 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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\*  
DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*  
\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	1856.	475.	0.0040	0.0005	13.6
%-ANTIMONY	564.1	984.	87042.	1.5441	0.0062	0.4
%-ARSENIC	657.1	475.	3735.	0.3358	0.0090	2.7

1009:	139.	157.	154.	164.	146.	141.	167.	152.	137.
1010:	178.	151.	168.	205.	204.	205.	210.	192.	160.
1027:	171.	156.	130.	152.	157.	140.	137.	147.	120.
1117:	5368.	6930.	6832.	5687.	3600.	1820.	966.	1475.	3841.
1126:	8441.	13617.	16274.	16483.	13270.	8204.	3575.	1051.	238.
1135:	91.	57.	61.	44.	59.	59.	70.	74.	75.
1301:	33.	32.	39.	27.	25.	33.	36.	46.	56.
1310:	85.	199.	414.	627.	726.	726.	574.	337.	159.
1319:	83.	39.	32.	31.	25.	23.	26.	38.	51.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.027

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.27	488.	1906.	3.33	1022.95	1017	13	8.126E-01	13.6
2	2	559.11	36389.	1342.	2.39	1118.56	1107	34	6.065E 01	0.6
3	2	564.07	89395.	1011.	2.41	1128.48	1107	34	1.490E 02	0.3
4	1	602.70	2442.	663.	2.47	1205.68	1198	17	4.070E 00	2.5
5	1	645.87	184.	466.	2.49	1291.93	1285	15	3.072E-01	18.4
6	1	657.09	3836.	488.	2.39	1314.36	1305	19	6.393E 00	1.8
7	1	665.38	356.	498.	3.27	1330.94	1324	19	5.927E-01	10.5



\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:38:45 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0219F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6982.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1630:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2358.	0. <	0.0019	NOT DETECTABLE	
%-ANTIMONY	564.1	1089.	91928.	1.6409	0.0064	0.4
%-ARSENIC	657.1	632.	3926.	0.3563	0.0095	2.7

1009:	155.	144.	169.	182.	128.	157.	149.	159.	160.
1010:	178.	180.	181.	226.	199.	197.	206.	186.	169.
1027:	161.	156.	160.	127.	148.	156.	146.	131.	154.
1117:	5650.	6970.	7341.	5891.	3780.	1941.	1038.	1566.	4133.
1126:	8918.	14324.	17530.	17346.	14042.	8615.	3762.	1095.	231.
1135:	92.	71.	70.	59.	78.	72.	66.	81.	77.
1301:	32.	34.	31.	47.	37.	39.	33.	39.	52.
1310:	92.	221.	446.	650.	803.	791.	584.	366.	173.
1319:	82.	37.	16.	41.	22.	27.	22.	36.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.027

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.12	37921.	1488.	2.39	1118.58	1108	32	6.320E 01	0.5
2	2	564.07	94412.	1118.	2.40	1128.47	1108	32	1.574E 02	0.3
3	1	602.75	2657.	611.	2.42	1205.77	1197	17	4.428E 00	2.4
4	1	645.36	172.	601.	2.54	1290.92	1282	18	2.861E-01	21.9
5	1	657.09	4033.	649.	2.35	1314.36	1305	19	6.721E 00	1.8
6	1	665.59	282.	427.	2.49	1331.36	1325	16	4.705E-01	12.1

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 \*\*\*\*\* 14 DEC 1979 9:39:54 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8826.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1640:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	3126.	561.	0.0038	0.0006	14.7
%-ANTIMONY	564.1	1484.	128458.	1.8172	0.0063	0.3
%-ARSENIC	657.0	1150.	5581.	0.4024	0.0101	2.5

1009:	213.	242.	224.	222.	226.	215.	237.	245.	233.
1018:	247.	231.	274.	300.	336.	314.	310.	263.	266.
1027:	219.	207.	186.	202.	213.	211.	205.	203.	205.
1117:	8070.	9902.	9881.	8091.	5315.	2623.	1531.	2154.	5686.
1126:	12399.	20153.	24587.	24553.	19577.	11916.	5263.	1605.	334.
1135:	134.	109.	127.	91.	101.	102.	112.	114.	112.
1301:	53.	53.	46.	62.	58.	58.	65.	75.	82.
1310:	167.	349.	653.	992.	1104.	1049.	778.	519.	274.
1319:	122.	67.	59.	37.	52.	51.	52.	57.	50.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.039

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PN	CTS/SEC	%ERR
1	1	511.27	583.	3248.	2.56	1022.94	1017	14	9.715E-01	14.7
2	2	559.10	53664.	1975.	2.41	1118.54	1107	34	8.944E 01	0.5
3	2	564.07	133478.	1542.	2.38	1128.47	1107	34	2.225E 02	0.3
4	1	602.70	3561.	1233.	2.39	1205.67	1195	21	5.934E 00	2.2
5	1	645.96	288.	764.	3.02	1292.13	1285	15	4.793E-01	15.1
6	1	657.02	5799.	1194.	2.45	1314.23	1302	22	9.665E 00	1.6
7	1	665.55	331.	673.	2.06	1331.27	1323	14	5.521E-01	12.6

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:41:07 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7162.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1651:13 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2706.	0. <	0.0021	NOT DETECTABLE	
%-ANTIMONY	564.1	1144.	101939.	1.7805	0.0067	0.4
%-ARSENIC	657.1	874.	4478.	0.3998	0.0105	2.6

1009:	173.	199.	188.	176.	168.	183.	193.	195.	189.
1018:	191.	204.	234.	228.	228.	235.	244.	215.	191.
1027:	171.	181.	164.	164.	164.	146.	162.	152.	172.
1117:	6304.	7866.	8067.	6520.	4221.	2068.	1150.	1749.	4383.
1126:	9957.	15891.	19865.	19663.	15515.	9336.	4106.	1177.	264.
1135:	92.	80.	86.	84.	60.	65.	79.	81.	86.
1301:	35.	42.	32.	36.	44.	40.	44.	43.	56.
1310:	114.	262.	512.	740.	930.	851.	674.	423.	191.
1319:	88.	33.	38.	22.	33.	39.	36.	36.	32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.030

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.11	42356.	1502.	2.39	1118.57	1107	35	7.059E 01	0.5
2	2	564.07	105044.	1178.	2.36	1128.46	1107	35	1.751E 02	0.3
3	1	571.81	76.	716.	1.89	1143.95	1141	10	1.264E-01	52.0
4	1	575.70	93.	662.	2.36	1151.72	1150	12	1.542E-01	41.3
5	1	602.75	2942.	677.	2.31	1205.77	1196	18	4.904E 00	2.3
6	1	625.99	81.	442.	2.23	1252.22	1247	11	1.343E-01	39.1
7	1	645.90	228.	470.	3.06	1292.00	1286	12	3.795E-01	15.2
8	1	657.07	4615.	901.	2.39	1314.32	1302	23	7.691E 00	1.8
9	1	665.35	217.	510.	2.19	1330.86	1326	12	3.613E-01	16.5

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:42:17 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219I  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7652.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1701:43 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1790.	316.	0.0025	0.0005	19.8
%-ANTIMONY	564.1	1208.	108818.	1.7822	0.0066	0.4
%-ARSENIC	657.1	707.	4729.	0.3970	0.0102	2.6

1009:	163.	219.	190.	199.	181.	171.	207.	176.	205.
1018:	182.	202.	217.	238.	245.	239.	221.	196.	190.
1027:	165.	164.	194.	180.	159.	167.	168.	167.	174.
1117:	6745.	8239.	8395.	6861.	4352.	2145.	1211.	1792.	4686.
1126:	10645.	17211.	21103.	20399.	16553.	10064.	4322.	1274.	279.
1135:	103.	98.	82.	79.	66.	73.	82.	85.	79.
1301:	40.	39.	52.	36.	39.	44.	39.	61.	66.
1310:	133.	246.	539.	790.	993.	933.	711.	432.	204.
1319:	83.	43.	43.	44.	38.	37.	44.	37.	56.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.034

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	327.	1851.	2.21	1022.58	1018	10	5.449E-01	19.7
2	2	559.10	44535.	1599.	2.39	1118.55	1107	35	7.422E 01	0.5
3	2	564.06	112506.	1249.	2.38	1128.45	1107	35	1.675E 02	0.3
4	1	602.76	2993.	1137.	2.48	1205.79	1198	20	4.988E 00	2.5
5	1	645.95	263.	633.	2.91	1292.11	1285	14	4.375E-01	15.1
6	1	657.07	4890.	730.	2.33	1314.33	1305	18	8.150E 00	1.7
7	1	665.16	321.	562.	2.60	1330.50	1324	15	5.355E-01	12.0

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 \*\*\*\*\* 14 DEC 1979 9:43:28 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6574.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1712:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2376.	772.	0.0072	0.0007	9.6
%-ANTIMONY	564.1	1102.	92631.	1.7692	0.0069	0.4
%-ARSENIC	657.1	633.	4227.	0.4149	0.0109	2.6

1009:	157.	175.	144.	124.	159.	153.	146.	160.	135.
1018:	167.	184.	204.	255.	261.	237.	210.	198.	179.
1027:	197.	163.	150.	141.	144.	144.	122.	141.	143.

1117:	5781.	7211.	7261.	5898.	3895.	1908.	1068.	1474.	4075.
1126:	8970.	14532.	17906.	17580.	14178.	8627.	3679.	1028.	206.
1135:	85.	73.	58.	58.	55.	61.	77.	100.	77.

1301:	28.	30.	25.	39.	32.	57.	40.	56.	63.
1310:	103.	244.	468.	717.	824.	751.	641.	391.	184.
1319:	71.	42.	34.	27.	33.	20.	37.	18.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.029

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.96	794.	2444.	3.73	1022.34	1016	16	1.324E 00	9.6
2	2	559.11	38604.	1366.	2.40	1118.56	1107	35	6.434E 01	0.5
3	2	564.07	95293.	1134.	2.38	1128.46	1107	35	1.588E 02	0.3
4	1	570.81	128.	588.	2.11	1141.93	1141	9	2.128E-01	28.7
5	1	602.76	2546.	743.	2.30	1205.79	1196	19	4.244E 00	2.5
6	1	646.16	301.	502.	3.52	1292.52	1283	16	5.016E-01	12.2
7	1	657.06	4348.	651.	2.47	1314.32	1303	23	7.247E 00	1.8
8	1	665.40	306.	444.	2.44	1330.98	1325	16	5.103E-01	11.5

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 \*\*\*\*\* 14 DEC 1979 9:44:41 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7439.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1722:49 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2202.	486.	0.0041	0.0006	14.4
%-ANTIMONY	564.1	1162.	97082.	1.6416	0.0063	0.4
%-ARSENIC	657.0	317.	4315.	0.3761	0.0096	2.5

1009:	193.	163.	159.	186.	160.	169.	168.	157.	158.
1018:	173.	186.	208.	223.	236.	229.	204.	196.	192.
1027:	162.	167.	143.	161.	149.	146.	143.	149.	170.
1117:	6132.	7599.	7401.	6170.	3998.	1909.	1046.	1629.	4154.
1126:	9409.	15280.	18434.	18459.	14930.	9089.	3895.	1119.	247.
1135:	110.	75.	72.	71.	66.	74.	98.	74.	109.
1301:	31.	30.	36.	37.	39.	35.	32.	43.	69.
1310:	100.	254.	492.	774.	826.	875.	621.	387.	173.
1319:	98.	38.	19.	21.	35.	33.	32.	36.	48.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.029

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	500.	2265.	3.13	1022.40	1016	14	8.338E-01	14.4
2	2	559.11	39795.	1491.	2.37	1118.55	1108	34	6.632E 01	0.5
3	2	564.07	99871.	1195.	2.39	1128.47	1108	34	1.665E 02	0.3
4	1	571.20	103.	674.	2.07	1142.73	1141	9	1.717E-01	37.5
5	1	602.69	2657.	988.	2.32	1205.65	1196	23	4.428E 00	2.6
6	1	645.64	274.	498.	2.94	1291.49	1287	15	4.562E-01	13.2
7	2	657.05	4440.	327.	2.36	1314.28	1306	32	7.399E 00	1.6
8	2	665.28	293.	296.	2.43	1330.74	1306	32	4.891E-01	10.3

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 \*\*\*\*\* 14 DEC 1979 9:45:51 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7719.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1733:19 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	2454.	418.	0.0034	0.0006	17.5
%-ANTIMONY	564.1	1316.	109384.	1.7859	0.0066	0.4
%-ARSENIC	657.1	866.	4871.	0.4110	0.0105	2.6

1009:	215.	187.	191.	177.	188.	186.	185.	186.	170.
1010:	208.	218.	241.	258.	265.	273.	236.	214.	204.
1027:	198.	186.	195.	183.	161.	171.	181.	189.	180.
1117:	6881.	8572.	8604.	7028.	4353.	2217.	1216.	1721.	4754.
1126:	10551.	17232.	21240.	20924.	16636.	10139.	4444.	1194.	285.
1135:	109.	88.	83.	89.	94.	82.	90.	92.	98.
1301:	49.	40.	43.	44.	53.	52.	38.	58.	72.
1310:	113.	289.	540.	770.	970.	963.	771.	463.	199.
1319:	71.	36.	41.	41.	35.	43.	39.	50.	51.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.034

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.73	432.	2537.	2.38	1021.86	1015	13	7.204E-01	17.5
2	2	559.10	45264.	1847.	2.36	1118.54	1109	30	7.544E 01	0.5
3	2	564.07	113092.	1361.	2.37	1128.46	1109	30	1.885E 02	0.3
4	1	602.70	3157.	1297.	2.33	1205.67	1196	22	5.262E 00	2.4
5	1	645.94	284.	682.	2.46	1292.09	1285	16	4.733E-01	14.5
6	1	657.11	5036.	896.	2.40	1314.41	1302	21	8.394E 00	1.7
7	1	665.25	350.	535.	2.42	1330.67	1323	15	5.826E-01	11.0



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 \*\*\*\*\* 14 DEC 1979 9:47:01 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0219M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 0012.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 13DEC79 1743:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2584.	774.	0.0061	0.0006	10.0
%-ANTIMONY	564.1	1491.	120857.	1.9046	0.0068	0.4
%-ARSENIC	657.1	877.	5448.	0.4450	0.0111	2.5

1009:	211.	223.	226.	227.	214.	209.	200.	216.	215.
1018:	238.	238.	274.	292.	295.	285.	305.	210.	248.
1027:	188.	198.	218.	196.	195.	188.	195.	190.	211.

1117:	7386.	9555.	9643.	7786.	4916.	2412.	1364.	1929.	4872.
1126:	11507.	19069.	23544.	23535.	18745.	11194.	4909.	1407.	314.
1135:	131.	118.	111.	104.	102.	103.	99.	115.	130.

1301:	46.	43.	48.	51.	54.	55.	43.	67.	63.
1310:	132.	306.	598.	899.	1111.	994.	838.	500.	274.
1319:	100.	54.	47.	40.	39.	37.	41.	36.	46.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.036

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	801.	2676.	3.54	1022.60	1015	13	1.335E 00	10.0
2	2	559.12	49598.	2014.	2.32	1118.58	1110	32	8.266E 01	0.5
3	2	564.08	125162.	1544.	2.34	1128.48	1110	32	2.086E 02	0.3
4	1	571.76	127.	963.	1.68	1143.85	1141	10	2.110E-01	36.4
5	1	602.74	3408.	1091.	2.36	1205.75	1197	18	5.680E 00	2.2
6	1	645.90	237.	633.	2.27	1292.00	1285	13	3.955E-01	16.6
7	1	657.09	5642.	908.	2.43	1314.36	1303	21	9.404E 00	1.6
8	1	665.16	352.	620.	2.64	1330.50	1325	14	5.859E-01	11.5



\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:48:12 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0219N  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7665.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1754:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2534.	0. <	0.0020	NOT DETECTABLE	
%-ANTIMONY	564.1	950.	95719.	1.5797	0.0061	0.4
%-ARSENIC	657.1	339.	4132.	0.3544	0.0091	2.6

1009:	155.	168.	147.	154.	177.	172.	155.	185.	187.
1018:	158.	176.	215.	212.	228.	230.	205.	216.	201.
1027:	154.	167.	163.	150.	160.	149.	166.	149.	140.
1117:	5742.	7082.	7335.	6147.	3780.	1885.	993.	1456.	3908.
1126:	8743.	14980.	18842.	18505.	15007.	9034.	3830.	1037.	221.
1135:	80.	70.	72.	70.	65.	59.	66.	74.	59.
1301:	36.	32.	37.	43.	37.	36.	41.	51.	57.
1310:	124.	217.	412.	704.	790.	828.	656.	380.	239.
1319:	60.	38.	39.	33.	32.	31.	26.	28.	57.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.029

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.13	38198.	1407.	2.36	1118.60	1107	35	6.366E 01	0.5
2	2	564.09	98470.	978.	2.33	1128.51	1107	35	1.641E 02	0.3
3	1	602.69	2671.	759.	2.33	1205.65	1198	18	4.452E 00	2.5
4	1	645.56	228.	380.	3.20	1291.33	1286	12	3.807E-01	14.0
5	4	657.14	4251.	349.	2.41	1314.46	1305	33	7.085E 00	1.7
6	4	665.20	289.	347.	2.72	1330.58	1305	33	4.813E-01	11.0

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:49:26 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q2190  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8901.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1804:59 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3344.	707.	0.0051	0.0006	12.2
%-ANTIMONY	564.1	1574.	127502.	1.8154	0.0063	0.3
%-ARSENIC	657.1	998.	5468.	0.4057	0.0102	2.5

1009:	222.	233.	208.	228.	199.	211.	214.	203.	249.
1018:	252.	254.	278.	283.	303.	301.	302.	269.	239.
1027:	239.	228.	218.	205.	206.	226.	201.	219.	209.
1117:	7860.	9811.	9909.	8271.	5276.	2627.	1390.	1903.	5211.
1126:	12029.	19839.	24805.	24734.	19830.	12043.	5139.	1451.	334.
1135:	143.	128.	107.	110.	88.	91.	104.	100.	123.
1301:	47.	61.	55.	49.	49.	62.	70.	64.	96.
1310:	137.	287.	562.	964.	1067.	1121.	828.	524.	263.
1319:	86.	44.	52.	62.	44.	45.	41.	55.	50.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.039

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	735.	3475.	3.55	1022.41	1015	16	1.225E 00	12.2
2	2	559.13	52762.	2214.	2.38	1118.59	1109	32	8.794E 01	0.5
3	2	564.09	132485.	1635.	2.34	1128.50	1109	32	2.208E 02	0.3
4	10	571.56	128.	524.	1.61	1143.43	1140	15	2.133E-01	27.3
5	10	575.22	106.	464.	1.61	1150.76	1140	15	1.762E-01	31.0
6	1	602.74	3661.	1075.	2.36	1205.74	1197	18	6.102E 00	2.1
7	1	645.00	291.	786.	2.57	1291.79	1285	14	4.854E-01	15.1
8	1	657.11	5682.	1036.	2.35	1314.40	1304	21	9.469E 00	1.6
9	1	665.50	397.	561.	2.32	1331.17	1325	12	6.610E-01	10.0

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:50:37 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219P  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7884.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 13DEC79 1815:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	510.7	1994.	373.	0.0031	0.0005	17.7
%-ANTIMONY	564.1	963.	102467.	1.6502	0.0062	0.4
%-ARSENIC	657.1	693.	4286.	0.3607	0.0095	2.6

1009:	177.	165.	180.	159.	162.	178.	183.	176.	180.
1018:	165.	190.	248.	235.	223.	252.	234.	205.	168.
1027:	171.	198.	156.	162.	158.	153.	137.	165.	164.
1117:	6037.	7683.	7801.	6398.	4163.	2107.	1093.	1454.	4090.
1126:	9317.	15922.	19958.	20096.	16185.	9720.	4106.	1196.	256.
1135:	110.	92.	81.	74.	80.	77.	68.	87.	79.
1301:	31.	30.	29.	42.	44.	37.	41.	43.	61.
1310:	112.	224.	439.	735.	875.	833.	676.	429.	194.
1319:	73.	41.	37.	30.	38.	35.	40.	46.	37.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.030

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.73	385.	2054.	2.25	1021.06	1017	11	6.411E-01	17.7
2	2	559.13	40689.	1423.	2.35	1118.60	1107	33	6.781E 01	0.5
3	2	564.10	105588.	992.	2.32	1128.53	1107	33	1.760E 02	0.3
4	1	602.76	2991.	948.	2.41	1205.78	1194	20	4.986E 00	2.4
5	1	646.03	297.	714.	3.35	1292.25	1281	21	4.948E-01	14.2
6	1	657.12	4416.	714.	2.36	1314.42	1306	18	7.360E 00	1.8
7	1	665.71	345.	598.	3.01	1331.60	1323	20	5.747E-01	11.6

\*\*\*\*\* 14 DEC 1979 9:51:49 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 02190  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 81.99.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1826:07 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	2492.	489.	0.0039	0.0006	15.1
Z-ANTIMONY	564.1	1044.	102929.	1.5970	0.0060	0.4
Z-ARSENIC	657.1	617.	4540.	0.3691	0.0095	2.6

1009:	166.	175.	166.	172.	169.	198.	158.	194.	192.
1018:	173.	215.	218.	221.	256.	232.	244.	215.	183.
1027:	208.	169.	187.	174.	165.	145.	158.	170.	176.
1117:	6226.	7874.	8059.	6664.	4320.	2099.	1118.	1527.	3897.
1126:	9241.	15924.	20295.	20179.	16390.	9929.	4121.	1152.	260.
1135:	118.	91.	71.	83.	86.	80.	87.	80.	83.
1301:	47.	36.	32.	46.	31.	37.	48.	57.	57.
1310:	92.	236.	485.	708.	911.	905.	703.	462.	202.
1319:	85.	43.	39.	29.	31.	36.	36.	39.	28.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.032

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	505.	2572.	3.42	1022.56	1015	14	8.410E-01	15.1
2	2	559.15	41697.	1422.	2.33	1118.63	1108	31	6.949E 01	0.5
3	2	564.11	106240.	1077.	2.31	1128.54	1108	31	1.771E 02	0.3
4	1	602.75	2899.	1080.	2.34	1205.78	1195	23	4.832E 00	2.5
5	1	646.00	222.	845.	2.32	1292.20	1284	21	3.692E-01	20.1
6	1	657.14	4686.	636.	2.38	1314.47	1305	18	7.810E 00	1.7
7	1	665.43	226.	480.	2.09	1331.03	1325	12	3.762E-01	15.5

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 \*\*\*\*\* 14 DEC 1979 9:53:03 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6988.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1836:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2275.	0. <	0.0021	NOT DETECTABLE	
%-ANTIMONY	564.1	997.	90626.	1.6528	0.0065	0.4
%-ARSENIC	657.2	646.	3930.	0.3766	0.0101	2.7

1009:	164.	171.	152.	147.	151.	165.	162.	148.	178.
1018:	149.	175.	192.	188.	210.	215.	191.	191.	150.
1027:	153.	135.	152.	173.	160.	143.	118.	134.	121.

1117:	5448.	6859.	7015.	5834.	3718.	1770.	920.	1228.	3448.
1126:	7943.	13836.	17560.	17820.	14598.	9005.	3725.	1055.	195.
1135:	73.	59.	58.	56.	57.	61.	64.	86.	82.

1301:	28.	26.	30.	27.	31.	31.	39.	36.	62.
1310:	87.	192.	413.	601.	786.	743.	678.	385.	180.
1319:	68.	36.	30.	20.	28.	38.	28.	37.	25.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.027

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.15	35762.	1315.	2.30	1118.63	1108	34	5.960E 01	0.6
2	2	564.13	93076.	1024.	2.32	1128.58	1108	34	1.551E 02	0.3
3	1	571.18	131.	598.	2.29	1142.67	1141	9	2.188E-01	28.1
4	1	602.77	2587.	1033.	2.25	1205.81	1195	25	4.312E 00	2.7
5	1	646.05	235.	515.	2.11	1292.30	1283	17	3.924E-01	15.3
6	1	657.17	4036.	663.	2.40	1314.53	1304	21	6.727E 00	1.8
7	1	665.53	282.	472.	3.45	1331.24	1325	16	4.705E-01	12.6

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 \*\*\*\*\* 14 DEC 1979 9:54:14 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q2195  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6663.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1847:08 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	1611.	307.	0.0031	0.0006	19.4
%-ANTIMONY	564.1	803.	79495.	1.5234	0.0063	0.4
%-ARSENIC	657.1	483.	3475.	0.3509	0.0096	2.7

1009:	148.	139.	144.	118.	133.	137.	145.	134.	141.
1018:	118.	148.	163.	166.	191.	173.	178.	160.	141.
1027:	126.	103.	149.	129.	142.	119.	139.	101.	126.
1117:	4806.	6068.	6178.	5070.	3329.	1632.	890.	1128.	2957.
1126:	7070.	12129.	15721.	15697.	12705.	7804.	3197.	853.	183.
1135:	85.	57.	59.	51.	49.	51.	60.	67.	65.
1301:	42.	26.	25.	29.	37.	36.	34.	38.	53.
1310:	76.	161.	354.	561.	703.	685.	543.	353.	146.
1319:	66.	35.	28.	29.	20.	21.	25.	30.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.024

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	314.	1649.	2.87	1022.47	1018	12	5.232E-01	19.4
2	2	559.15	31744.	1105.	2.33	1118.63	1108	33	5.291E 01	0.6
3	2	564.12	81372.	822.	2.30	1128.56	1108	33	1.356E 02	0.4
4	1	602.75	2231.	656.	2.24	1205.77	1195	19	3.719E 00	2.7
5	1	645.93	185.	528.	2.40	1292.07	1285	16	3.087E-01	19.2
6	1	657.14	3557.	494.	2.35	1314.47	1303	21	5.928E 00	1.9
7	1	665.48	247.	322.	2.33	1331.13	1324	14	4.121E-01	12.2

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 \*\*\*\*\* 14 DEC 1979 9:55:24 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q219T  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7018.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1857:34 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2008.	0. <	0.0020	NOT DETECTABLE	
%-ANTIMONY	564.1	874.	86373.	1.5743	0.0063	0.4
%-ARSENIC	657.2	451.	3760.	0.3621	0.0096	2.7

1009:	150.	140.	155.	148.	144.	142.	140.	145.	152.
1010:	134.	141.	152.	172.	172.	188.	153.	162.	163.
1027:	142.	132.	140.	135.	119.	135.	138.	161.	128.
1117:	5079.	6625.	6765.	5510.	3594.	1810.	845.	1195.	3179.
1126:	7584.	13311.	16971.	17122.	13977.	8291.	3568.	948.	211.
1135:	95.	53.	59.	54.	68.	66.	64.	75.	58.
1301:	33.	33.	28.	33.	40.	30.	25.	36.	44.
1310:	86.	203.	361.	572.	724.	708.	634.	398.	160.
1319:	59.	44.	27.	24.	29.	22.	26.	25.	44.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.027

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.16	34157.	1257.	2.29	1118.65	1109	30	5.693E 01	0.6
2	2	564.12	88707.	897.	2.30	1128.57	1109	30	1.478E 02	0.3
3	1	602.81	2445.	1101.	2.37	1205.89	1194	30	4.076E 00	2.8
4	1	646.36	217.	563.	2.89	1292.91	1283	16	3.611E-01	17.1
5	1	657.20	3862.	463.	2.45	1314.58	1307	17	6.436E 00	1.8
6	1	665.43	327.	367.	3.35	1331.04	1324	14	5.442E-01	10.1



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 \*\*\*\*\* 14 DEC 1979 9:56:37 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7119.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1908:05 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2491.	1155.	0.0111	0.0008	6.8
%-ANTIMONY	564.1	475.	45460.	0.8184	0.0042	0.5
%-ARSENIC	657.1	392.	2390.	0.2280	0.0070	3.1

1009:	76.	82.	79.	82.	91.	93.	82.	96.	123.
1018:	125.	172.	197.	240.	248.	255.	228.	220.	157.
1027:	129.	105.	103.	86.	83.	82.	68.	94.	65.
1117:	3208.	4231.	4414.	3620.	2477.	1151.	497.	636.	1673.
1126:	3891.	6848.	8927.	9084.	7408.	4575.	1935.	549.	98.
1135:	35.	32.	38.	26.	37.	27.	39.	38.	44.
1301:	22.	22.	14.	22.	18.	28.	25.	23.	26.
1310:	46.	117.	252.	393.	509.	498.	366.	239.	116.
1319:	37.	14.	13.	16.	9.	20.	14.	13.	24.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.015

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	1173.	2528.	3.31	1022.56	1014	27	1.954E 00	6.8
2	2	559.19	22131.	631.	2.31	1118.71	1109	32	3.689E 01	0.7
3	2	564.14	46147.	482.	2.29	1128.61	1109	32	7.691E 01	0.5
4	1	602.84	1363.	541.	2.25	1205.94	1197	26	2.272E 00	3.7
5	1	644.83	200.	270.	4.37	1289.87	1284	15	3.327E-01	13.7
6	1	657.13	2426.	397.	2.28	1314.45	1307	18	4.044E 00	2.4
7	1	665.51	167.	234.	2.17	1331.20	1325	14	2.789E-01	15.2



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 \*\*\*\*\* 14 DEC 1979 9:57:47 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9067.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1918:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1730.	1504.	0.0115	0.0005	4.7
%-ANTIMONY	564.1	433.	49033.	0.6943	0.0035	0.5
%-ARSENIC	657.1	336.	2634.	0.1982	0.0058	2.9

1009:	80.	83.	107.	81.	86.	102.	112.	81.	106.
1018:	129.	166.	220.	311.	316.	308.	258.	216.	195.
1027:	117.	105.	87.	82.	79.	79.	78.	87.	76.
1117:	3365.	4491.	4649.	3875.	2426.	1152.	531.	693.	1676.
1126:	4263.	7351.	9697.	9711.	7943.	4956.	2068.	546.	118.
1135:	31.	34.	35.	30.	42.	33.	34.	41.	31.
1301:	23.	24.	26.	19.	20.	20.	21.	25.	38.
1310:	56.	137.	249.	429.	554.	514.	439.	245.	129.
1319:	39.	17.	16.	21.	18.	20.	15.	16.	25.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.017

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	1529.	1759.	3.06	1022.45	1012	20	2.549E 00	4.7
2	2	559.17	23155.	598.	2.28	1118.68	1107	31	3.859E 01	0.7
3	2	564.14	49857.	440.	2.29	1128.60	1107	31	8.309E 01	0.5
4	1	602.80	1400.	386.	2.28	1205.87	1195	20	2.333E 00	3.4
5	1	645.79	104.	238.	2.34	1291.78	1286	12	1.725E-01	23.4
6	1	657.15	2679.	341.	2.31	1314.48	1306	17	4.464E 00	2.2
7	1	665.65	165.	252.	2.93	1331.48	1325	15	2.752E-01	15.8

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 9:59:02 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0220C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7711.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1928:50 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 607. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1160.	1127.	0.0102	0.0005	5.2
%-ANTIMONY	564.1	439.	36346.	0.6063	0.0034	0.6
%-ARSENIC	657.1	308.	1928.	0.1713	0.0056	3.3

1009:	74.	74.	69.	54.	74.	74.	62.	92.	84.
1018:	91.	119.	168.	209.	232.	209.	215.	175.	121.
1027:	97.	65.	63.	76.	53.	56.	61.	63.	60.
1117:	2556.	3403.	3437.	3026.	1852.	856.	437.	487.	1224.
1126:	3100.	5513.	7151.	7416.	5968.	3679.	1480.	454.	84.
1135:	34.	23.	22.	17.	15.	28.	29.	33.	34.
1301:	13.	15.	19.	11.	14.	18.	20.	15.	26.
1310:	33.	108.	197.	322.	372.	397.	296.	177.	95.
1319:	33.	16.	13.	6.	15.	17.	11.	15.	12.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.012

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	1140.	1174.	3.04	1022.56	1012	20	1.900E 00	5.2
2	2	559.18	17460.	549.	2.29	1118.70	1108	35	2.910E 01	0.8
3	2	564.14	36773.	445.	2.26	1128.61	1108	35	6.129E 01	0.5
4	1	602.79	967.	436.	2.10	1205.86	1197	21	1.612E 00	4.5
5	1	657.12	1950.	312.	2.36	1314.43	1304	22	3.250E 00	2.6
6	1	665.66	131.	155.	2.64	1331.50	1326	13	2.184E-01	16.1

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 \*\*\*\*\* 14 DEC 1979 10:00:12 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5821.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1939:12 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 606. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	846.	1009.	0.0122	0.0006	5.2
%-ANTIMONY	564.1	335.	27068.	0.5992	0.0039	0.6
%-ARSENIC	657.1	220.	1478.	0.1748	0.0062	3.5

1009:	52.	54.	55.	68.	54.	53.	64.	57.	76.
1018:	105.	113.	138.	169.	200.	226.	204.	139.	114.
1027:	84.	72.	47.	38.	54.	51.	57.	49.	48.
1117:	1868.	2575.	2642.	2234.	1386.	695.	281.	352.	946.
1126:	2224.	4195.	5266.	5426.	4439.	2766.	1145.	299.	52.
1135:	25.	14.	13.	13.	25.	17.	19.	22.	24.
1301:	11.	9.	8.	11.	12.	18.	19.	13.	17.
1310:	23.	77.	148.	260.	275.	276.	215.	155.	65.
1319:	20.	8.	11.	8.	6.	12.	11.	7.	10.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.010

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.16	1019.	854.	2.85	1022.72	1014	17	1.698E 00	5.2
2	2	559.19	12995.	430.	2.27	1118.71	1108	35	2.166E 01	0.9
3	2	564.14	27340.	338.	2.28	1128.61	1108	35	4.557E 01	0.6
4	1	602.76	792.	280.	2.44	1205.79	1199	27	1.320E 00	4.7
5	1	657.10	1493.	222.	2.47	1314.39	1303	22	2.488E 00	3.0
6	1	665.45	140.	133.	2.85	1331.07	1326	15	2.332E-01	14.5

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:01:24 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10054.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1949:31 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3548.	1769.	0.0125	0.0007	5.4
%-ANTIMONY	564.1	494.	54088.	0.6945	0.0033	0.5
%-ARSENIC	657.2	315.	3010.	0.2070	0.0058	2.8

1009:	92.	104.	106.	105.	108.	101.	117.	133.	143.
1018:	159.	248.	275.	324.	363.	357.	335.	277.	198.
1027:	150.	126.	111.	104.	102.	88.	88.	90.	91.
1117:	3799.	5016.	5240.	4432.	2894.	1379.	615.	695.	1952.
1126:	4612.	8200.	10560.	10644.	8770.	5529.	2260.	652.	135.
1135:	58.	42.	33.	38.	39.	36.	42.	43.	57.
1301:	22.	23.	20.	30.	22.	14.	27.	31.	35.
1310:	70.	146.	292.	447.	607.	565.	488.	322.	130.
1319:	62.	30.	24.	30.	16.	18.	19.	26.	29.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.019

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.99	1802.	3613.	3.23	1022.39	1013	33	3.004E 00	5.3
2	2	559.19	26401.	700.	2.30	1118.73	1108	29	4.400E 01	0.6
3	2	564.14	55089.	503.	2.31	1128.61	1108	29	9.181E 01	0.4
4	1	571.76	90.	458.	2.33	1143.83	1139	12	1.498E-01	35.6
5	1	602.00	1496.	535.	2.22	1205.87	1195	20	2.493E 00	3.4
6	1	646.00	112.	328.	2.59	1292.19	1285	14	1.868E-01	25.0
7	1	657.19	3065.	321.	2.41	1314.56	1306	18	5.109E 00	2.0

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:02:33 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0220F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6439.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 1959:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6933.	0. <	0.0043	NOT DETECTABLE	
%-ANTIMONY	564.1	3782.	262553.	5.2740	0.0150	0.3
%-ARSENIC	657.2	2534.	13418.	1.4477	0.0318	2.2

1009:	536.	480.	470.	499.	541.	509.	490.	422.	497.
1018:	524.	540.	555.	589.	590.	569.	609.	546.	508.
1027:	509.	475.	490.	462.	436.	467.	511.	490.	458.
1117:18789.	24178.	24869.	20481.	13168.	6240.	3118.	3838.	10050.	
1126:23282.	40826.	51674.	52606.	41857.	25566.	10836.	3171.	861.	
1135:	513.	417.	398.	363.	353.	359.	366.	355.	376.
1301:	126.	135.	140.	149.	148.	141.	152.	166.	197.
1310:	311.	650.	1338.	2237.	2774.	2725.	2193.	1447.	635.
1319:	264.	157.	127.	138.	145.	129.	122.	171.	156.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.089

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.15	133895.	4857.	2.31	1118.63	1108	33	2.232E 02	0.3
2	2	564.11	285846.	4118.	2.30	1128.55	1108	33	4.764E 02	0.2
3	1	571.43	199.	3871.	2.32	1143.17	1140	11	3.322E-01	46.7
4	1	602.81	7793.	5644.	2.31	1205.88	1195	29	1.299E 01	1.8
5	1	645.89	559.	1806.	2.54	1291.98	1286	12	9.325E-01	12.0
6	1	657.16	14608.	2758.	2.32	1314.51	1306	18	2.435E 01	1.0
7	1	665.41	917.	2107.	2.32	1331.00	1324	15	1.528E 00	8.2

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 \*\*\*\*\* 14 DEC 1979 10:03:47 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7362.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2011:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 600. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1431.	1263.	0.0124	0.0006	5.1
%-ANTIMONY	564.1	442.	42981.	0.7566	0.0040	0.5
%-ARSENIC	657.2	310.	2299.	0.2180	0.0067	3.1

1009:	81.	68.	77.	96.	72.	86.	80.	119.	101.
1018:	129.	157.	201.	228.	277.	292.	244.	209.	139.
1027:	93.	92.	94.	66.	84.	87.	71.	74.	81.
1117:	2943.	3885.	4172.	3417.	2214.	1068.	474.	599.	1399.
1126:	3661.	6543.	8251.	8617.	6875.	4473.	1899.	534.	88.
1135:	33.	28.	29.	29.	23.	27.	28.	37.	34.
1301:	16.	12.	21.	22.	13.	23.	24.	24.	23.
1310:	47.	95.	218.	356.	428.	481.	393.	231.	122.
1319:	36.	22.	20.	7.	26.	15.	12.	12.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.013

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	1280.	1450.	2.94	1022.55	1013	18	2.133E 00	5.1
2	2	559.20	20259.	567.	2.27	1118.73	1107	35	3.377E 01	0.7
3	2	564.15	43558.	448.	2.31	1128.62	1107	35	7.260E 01	0.5
4	1	602.85	1332.	353.	2.40	1205.96	1198	17	2.219E 00	3.4
5	1	645.91	93.	266.	2.74	1292.03	1283	15	1.547E-01	27.1
6	1	657.22	2330.	314.	2.34	1314.63	1305	21	3.883E 00	2.3
7	1	665.26	188.	205.	2.94	1330.68	1325	15	3.131E-01	13.1

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:04:57 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9903.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 13DEC79 2021:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2024.	1523.	0.0112	0.0006	4.9
%-ANTIMONY	564.2	551.	51099.	0.6699	0.0033	0.5
%-ARSENIC	657.2	356.	2566.	0.1017	0.0054	3.0

1009:	94.	100.	106.	82.	94.	110.	104.	93.	120.
1018:	147.	197.	232.	285.	297.	304.	293.	245.	171.
1027:	118.	123.	107.	101.	101.	84.	78.	91.	93.
1117:	3396.	4526.	5006.	4050.	2587.	1232.	586.	618.	1679.
1126:	4215.	7703.	9988.	10284.	8534.	5264.	2144.	609.	101.
1135:	45.	43.	29.	30.	34.	26.	42.	48.	36.
1301:	22.	24.	23.	31.	20.	24.	18.	26.	24.
1310:	42.	107.	247.	398.	532.	532.	434.	266.	119.
1319:	51.	17.	20.	22.	14.	21.	5.	17.	23.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.017

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	1549.	2058.	3.26	1022.56	1011	22	2.581E 00	4.9
2	2	559.20	23992.	716.	2.27	1118.73	1107	36	3.999E 01	0.7
3	2	564.16	51958.	560.	2.27	1128.64	1107	36	8.660E 01	0.4
4	1	602.77	1477.	459.	2.35	1205.82	1194	22	2.461E 00	3.3
5	1	657.20	2609.	361.	2.27	1314.58	1306	18	4.348E 00	2.2
6	1	665.52	230.	273.	2.97	1331.21	1324	16	3.834E-01	12.2



\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:06:07 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q2201  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7253.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2031:44 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 607. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1211.	956.	0.0097	0.0006	6.1
%-ANTIMONY	564.2	358.	35399.	0.6348	0.0036	0.6
%-ARSENIC	657.2	221.	1883.	0.1829	0.0059	3.2

1009:	70.	82.	55.	76.	61.	64.	76.	72.	91.
1018:	88.	115.	145.	228.	224.	187.	191.	161.	124.
1027:	96.	66.	65.	73.	72.	60.	66.	49.	54.
1117:	2394.	3306.	3378.	2823.	1865.	929.	426.	484.	1238.
1126:	3025.	5274.	6894.	6942.	5876.	3627.	1512.	423.	78.
1135:	33.	17.	14.	14.	11.	31.	18.	26.	37.
1301:	11.	11.	9.	17.	10.	18.	9.	15.	22.
1310:	42.	86.	200.	279.	332.	395.	271.	207.	95.
1319:	25.	21.	9.	13.	9.	21.	9.	17.	13.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.012

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.96	968.	1225.	2.88	1022.32	1012	18	1.613E 00	6.1
2	2	559.20	16842.	476.	2.29	1118.74	1107	34	2.807E 01	0.8
3	2	564.15	35814.	362.	2.31	1128.63	1107	34	5.969E 01	0.5
4	1	571.15	88.	193.	2.64	1142.61	1140	9	1.470E-01	24.9
5	1	602.90	971.	409.	2.27	1206.06	1198	21	1.618E 00	4.4
6	1	657.19	1905.	223.	2.47	1314.57	1305	18	3.176E 00	2.6
7	1	665.55	145.	179.	1.96	1331.28	1325	12	2.414E-01	15.6



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 \*\*\*\*\* 14 DEC 1979 10:07:16 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0220J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7705.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2042:03 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 608. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	1365.	1353.	0.0131	0.0006	4.8
%-ANTIMONY	564.2	394.	39925.	0.6752	0.0037	0.5
%-ARSENIC	657.2	232.	2103.	0.1931	0.0060	3.1

1009:	85.	61.	80.	68.	80.	74.	89.	98.	107.
1018:	117.	167.	217.	224.	263.	230.	244.	178.	138.
1027:	132.	81.	79.	75.	60.	52.	60.	75.	63.
1117:	2735.	3727.	3780.	3264.	2073.	970.	444.	499.	1374.
1126:	3312.	5999.	7879.	7971.	6571.	4048.	1775.	482.	99.
1135:	44.	27.	30.	21.	24.	27.	12.	33.	36.
1301:	11.	12.	11.	19.	16.	16.	14.	21.	17.
1310:	32.	91.	196.	335.	421.	403.	325.	242.	94.
1319:	45.	10.	17.	15.	13.	12.	17.	15.	17.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.013

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PN	CTS/SEC	%ERR
1	1	510.95	1372.	1383.	3.31	1022.31	1012	21	2.286E 00	4.7
2	2	559.20	18885.	573.	2.26	1118.74	1109	29	3.147E 01	0.8
3	2	564.15	40461.	400.	2.28	1128.63	1109	29	6.744E 01	0.5
4	1	571.34	97.	422.	4.70	1142.99	1140	16	1.618E-01	31.8
5	1	602.89	1097.	431.	2.31	1206.05	1199	21	1.829E 00	4.1
6	1	646.40	145.	241.	3.34	1293.01	1283	19	2.422E-01	17.3
7	1	657.19	2131.	235.	2.40	1314.56	1307	16	3.551E 00	2.4
8	1	665.58	160.	211.	2.52	1331.33	1324	17	2.667E-01	15.2

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:08:25 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7043.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2052:25 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 659. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	8596.	2571.	0.0275	0.0015	5.5
%-ANTIMONY	564.1	4369.	296876.	5.5030	0.0152	0.3
%-ARSENIC	657.2	2877.	16002.	1.6153	0.0348	2.2

1009:	556.	609.	527.	625.	582.	584.	538.	633.	625.
1010:	663.	698.	778.	851.	901.	909.	778.	766.	728.
1027:	626.	578.	559.	510.	517.	553.	533.	535.	539.

1117:	22140.	28336.	29188.	24165.	15435.	7539.	3617.	4586.	11503.
1126:	27050.	45487.	58349.	58987.	47150.	29030.	12349.	3795.	1116.
1135:	634.	544.	518.	494.	420.	463.	454.	455.	471.

1301:	144.	170.	188.	168.	168.	172.	181.	175.	244.
1310:	387.	820.	1644.	2669.	3277.	3270.	2624.	1621.	821.
1319:	348.	201.	156.	170.	167.	161.	161.	177.	178.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.103

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	2837.	9484.	3.43	1022.55	1015	16	4.728E 00	5.5
2	2	559.15	160025.	5398.	2.32	1118.64	1107	35	2.667E 02	0.3
3	2	564.11	327552.	4820.	2.31	1128.55	1107	35	5.459E 02	0.2
4	1	602.78	9147.	4021.	2.31	1205.83	1198	16	1.524E 01	1.5
5	1	645.95	669.	2636.	2.44	1292.11	1285	15	1.115E 00	12.1
6	1	657.15	17656.	3175.	2.33	1314.49	1306	17	2.943E 01	0.9
7	1	665.35	1011.	2395.	2.27	1330.88	1325	13	1.685E 00	7.9

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:09:33 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 04 RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6656.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2103:36 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 606. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1120.	984.	0.0112	0.0007	5.8
%-ANTIMONY	564.2	330.	36066.	0.7087	0.0040	0.6
%-ARSENIC	657.1	264.	1689.	0.1813	0.0062	3.4

1009:	69.	54.	73.	69.	58.	63.	65.	78.	66.
1010:	115.	121.	164.	184.	190.	192.	178.	152.	101.
1027:	94.	87.	61.	64.	59.	38.	59.	55.	52.
1117:	2325.	3143.	3253.	2751.	1773.	919.	402.	466.	1192.
1126:	2851.	5419.	7020.	7237.	5983.	3783.	1610.	472.	82.
1135:	25.	21.	24.	15.	19.	14.	19.	24.	27.
1301:	9.	20.	16.	15.	17.	16.	16.	13.	22.
1310:	33.	77.	170.	298.	334.	334.	254.	181.	75.
1319:	37.	13.	14.	9.	19.	11.	20.	10.	15.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.010

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	994.	1131.	3.27	1022.37	1013	20	1.656E 00	5.8
2	2	559.20	16273.	424.	2.30	1118.74	1107	36	2.712E 01	0.8
3	2	564.17	36428.	333.	2.28	1128.66	1107	36	6.071E 01	0.5
4	1	602.78	1123.	308.	2.29	1205.83	1194	23	1.871E 00	3.7
5	1	657.12	1706.	266.	2.38	1314.43	1307	17	2.844E 00	2.8
6	1	665.64	114.	201.	2.55	1331.46	1324	15	1.904E-01	20.0

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:10:42 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0220M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7881.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2113:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1350.	1240.	0.0121	0.0006	5.1
%-ANTIMONY	564.2	466.	42157.	0.7010	0.0037	0.5
%-ARSENIC	657.2	320.	2272.	0.2069	0.0064	3.1

1009:	84.	74.	77.	87.	87.	78.	85.	91.	93.
1018:	106.	163.	193.	224.	263.	250.	248.	195.	140.
1027:	119.	79.	74.	69.	67.	68.	65.	81.	72.
1117:	2948.	3827.	4126.	3480.	2263.	1100.	491.	565.	1434.
1126:	3532.	6186.	8295.	8662.	7022.	4298.	1847.	558.	103.
1135:	39.	32.	29.	25.	28.	27.	37.	29.	41.
1301:	20.	18.	19.	18.	11.	9.	24.	33.	31.
1310:	41.	105.	223.	326.	442.	469.	406.	216.	111.
1319:	42.	21.	14.	14.	13.	14.	9.	23.	25.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.015

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	1259.	1370.	3.13	1022.54	1014	18	2.098E 00	5.1
2	2	559.21	20358.	631.	2.29	1118.76	1108	34	3.393E 01	0.7
3	2	564.16	42794.	473.	2.26	1128.65	1108	34	7.132E 01	0.5
4	1	602.85	1222.	461.	2.23	1205.97	1195	23	2.036E 00	3.8
5	1	657.23	2306.	325.	2.33	1314.64	1303	20	3.844E 00	2.4
6	1	665.28	157.	231.	2.55	1330.74	1324	14	2.610E-01	16.0

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:11:49 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0220N  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6979.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2124:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1620.	1214.	0.0135	0.0007	5.5
%-ANTIMONY	564.2	567.	53468.	1.0058	0.0048	0.5
%-ARSENIC	657.2	364.	2766.	0.2857	0.0083	2.9

1009:	95.	109.	110.	108.	88.	94.	110.	92.	89.
1018:	117.	156.	186.	253.	276.	263.	249.	225.	166.
1027:	143.	107.	106.	86.	90.	88.	80.	89.	84.
1117:	3713.	4891.	5180.	4304.	2817.	1362.	617.	708.	1754.
1126:	4428.	7986.	10248.	10760.	8870.	5610.	2353.	651.	143.
1135:	42.	53.	30.	37.	44.	40.	38.	36.	41.
1301:	15.	22.	21.	22.	23.	33.	17.	30.	36.
1310:	52.	134.	263.	438.	551.	542.	442.	305.	149.
1319:	45.	25.	20.	19.	22.	24.	18.	19.	29.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.019

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.15	1237.	1650.	3.08	1022.70	1014	18	2.061E 00	5.5
2	2	559.20	25634.	754.	2.28	1118.74	1107	33	4.272E 01	0.6
3	2	564.17	54457.	578.	2.30	1128.66	1107	33	9.076E 01	0.4
4	1	602.85	1526.	437.	2.39	1205.96	1198	17	2.544E 00	3.2
5	1	657.19	2817.	371.	2.40	1314.57	1307	16	4.695E 00	2.1
6	1	665.70	196.	271.	2.27	1331.58	1325	13	3.267E-01	14.0

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:13:01 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 02200  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8125.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2134:39 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 607. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1587.	1157.	0.0111	0.0006	5.7
%-ANTIMONY	564.2	403.	37125.	0.6009	0.0034	0.6
%-ARSENIC	657.2	234.	1968.	0.1754	0.0056	3.2

1009:

1010:	102.	146.	173.	245.	249.	249.	228.	167.	136.
1027:	104.	93.	73.	80.	68.	73.	61.	58.	65.

1117:	2655.	3399.	3696.	2988.	1984.	985.	449.	504.	1184.
1126:	3105.	5539.	7297.	7575.	6103.	3768.	1716.	471.	80.
1135:	30.	33.	14.	14.	13.	29.	18.	23.	28.

1301:	10.	16.	25.	20.	14.	20.	14.	17.	10.
1310:	41.	104.	162.	312.	359.	388.	328.	224.	91.
1319:	36.	18.	13.	10.	11.	11.	16.	15.	16.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.012

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	1170.	1606.	2.89	1022.41	1012	23	1.950E 00	5.7
2	2	559.20	17913.	588.	2.29	1118.74	1109	32	2.986E 01	0.8
3	2	564.16	37560.	407.	2.27	1128.64	1109	32	6.260E 01	0.5
4	1	602.84	1176.	473.	2.22	1205.96	1197	26	1.961E 00	3.9
5	1	646.46	85.	374.	2.39	1293.12	1284	20	1.409E-01	34.3
6	1	657.23	1991.	236.	2.43	1314.65	1306	17	3.319E 00	2.5
7	1	665.37	130.	170.	2.45	1330.92	1323	14	2.173E-01	16.7

\*\*\*\*\* 14 DEC 1979 10:14:13 AM \*\*\*\*\*

911.19065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220P  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8996.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2145:01 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 673. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	10699.	2434.	0.0213	0.0014	6.4
%-ANTIMONY	564.1	5710.	352878.	5.1691	0.0137	0.3
%-ARSENIC	657.2	4599.	19276.	1.5590	0.0333	2.1

1009:	709.	724.	730.	801.	735.	754.	758.	793.	742.
1018:	830.	873.	976.	1012.	1102.	1122.	1092.	874.	823.
1027:	767.	696.	680.	661.	640.	677.	673.	664.	643.
1117:	26130.	33616.	34811.	28740.	18144.	8927.	4553.	5579.	13904.
1126:	31418.	54297.	69624.	69752.	56615.	34635.	14961.	4600.	1541.
1135:	912.	776.	724.	706.	582.	615.	617.	655.	676.
1301:	221.	223.	227.	235.	245.	257.	251.	246.	324.
1310:	468.	1026.	2046.	3132.	3934.	3883.	3241.	1960.	998.
1319:	447.	260.	222.	241.	218.	208.	221.	222.	201.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.129

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	2748.	12083.	2.75	1022.56	1015	15	4.581E 00	6.3
2	2	559.15	194115.	6951.	2.31	1118.64	1107	35	3.235E 02	0.2
3	2	564.12	398533.	6449.	2.31	1128.56	1107	35	6.642E 02	0.2
4	1	570.94	405.	5623.	1.99	1142.19	1141	9	6.753E-01	28.3
5	1	602.78	11530.	6550.	2.38	1205.83	1194	20	1.922E 01	1.4
6	1	624.17	271.	2801.	2.73	1248.59	1243	10	4.524E-01	30.0
7	1	645.97	821.	3637.	2.16	1292.14	1286	14	1.368E 00	11.7
8	1	657.16	21770.	5194.	2.36	1314.50	1303	21	3.628E 01	0.9
9	1	665.40	1323.	3091.	2.33	1330.90	1325	13	2.205E 00	7.0



\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:15:24 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 02200  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8327.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2156:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1724.	1149.	0.0110	0.0007	5.9
%-ANTIMONY	564.2	497.	53532.	0.8488	0.0041	0.5
%-ARSENIC	657.2	299.	2803.	0.2461	0.0070	2.9

1009:	98.	109.	94.	88.	102.	105.	102.	104.	103.
1010:	133.	150.	194.	253.	255.	253.	247.	211.	164.
1027:	128.	99.	110.	85.	96.	81.	93.	87.	88.
1117:	3677.	4813.	5145.	4255.	2749.	1321.	601.	634.	1796.
1126:	4333.	7688.	10542.	10931.	8834.	5728.	2383.	672.	143.
1135:	37.	34.	34.	32.	42.	39.	33.	42.	41.
1301:	20.	18.	16.	13.	20.	26.	16.	29.	31.
1310:	61.	123.	234.	427.	541.	574.	465.	304.	137.
1319:	55.	26.	8.	20.	19.	12.	16.	16.	23.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.017

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	1168.	1753.	3.08	1022.60	1012	19	1.947E 00	5.9
2	2	559.20	25198.	710.	2.27	1118.74	1107	32	4.200E 01	0.7
3	2	564.18	54432.	506.	2.27	1128.69	1107	32	9.072E 01	0.4
4	1	602.86	1580.	439.	2.26	1205.98	1197	18	2.634E 00	3.2
5	1	657.23	2850.	304.	2.33	1314.65	1304	21	4.751E 00	2.1
6	1	665.68	243.	277.	2.51	1331.53	1325	16	4.048E-01	11.7



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 \*\*\*\*\* 14 DEC 1979 10:16:36 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q220R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7967.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2206:50 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1411.	1246.	0.0126	0.0006	5.2
%-ANTIMONY	564.2	452.	44319.	0.7358	0.0038	0.5
%-ARSENIC	657.2	315.	2218.	0.2044	0.0063	3.1

1009:	86.	71.	90.	78.	76.	73.	88.	92.	101.
1018:	131.	147.	207.	224.	257.	254.	221.	205.	126.
1027:	118.	93.	92.	69.	81.	77.	71.	67.	80.
1117:	2943.	3925.	4118.	3494.	2253.	1118.	509.	547.	1465.
1126:	3618.	6493.	8577.	8985.	7469.	4637.	1983.	547.	128.
1135:	33.	32.	30.	35.	35.	36.	47.	31.	36.
1301:	15.	16.	23.	12.	19.	18.	16.	28.	20.
1310:	44.	82.	193.	346.	427.	459.	386.	240.	123.
1319:	44.	20.	22.	14.	16.	18.	14.	22.	16.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.015

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	1265.	1432.	3.23	1022.40	1014	19	2.108E 00	5.1
2	2	559.21	20436.	633.	2.29	1118.75	1109	30	3.406E 01	0.7
3	2	564.18	44989.	459.	2.28	1128.68	1109	30	7.498E 01	0.5
4	1	602.71	1280.	391.	2.32	1205.68	1197	22	2.133E 00	3.6
5	1	646.07	106.	390.	2.78	1292.34	1281	24	1.761E-01	28.4
6	1	657.25	2251.	320.	2.31	1314.68	1305	20	3.752E 00	2.4
7	1	665.47	156.	207.	2.20	1331.12	1325	12	2.592E-01	15.5

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 \*\*\*\*\* 14 DEC 1979 10:17:48 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q2205  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 0139.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2217:12 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1355.	1086.	0.0108	0.0006	5.7
%-ANTIMONY	564.2	490.	44068.	0.7175	0.0038	0.5
%-ARSENIC	657.2	288.	2185.	0.1981	0.0061	3.1

1009:	73.	65.	72.	69.	82.	73.	68.	90.	114.
1018:	118.	144.	163.	222.	242.	264.	237.	172.	124.
1027:	103.	75.	73.	60.	80.	66.	82.	66.	81.
1117:	2825.	3819.	4140.	3392.	2199.	1084.	497.	509.	1468.
1126:	3494.	6522.	8498.	8821.	7357.	4758.	1976.	554.	93.
1135:	27.	23.	29.	25.	32.	25.	25.	18.	40.
1301:	23.	22.	19.	12.	19.	19.	16.	27.	29.
1310:	47.	89.	230.	327.	404.	455.	358.	233.	96.
1319:	43.	28.	14.	14.	19.	25.	15.	14.	11.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.015

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	1102.	1375.	2.81	1022.53	1014	18	1.837E 00	5.7
2	2	559.22	19880.	605.	2.25	1118.77	1108	36	3.313E 01	0.7
3	2	564.18	44734.	498.	2.30	1128.69	1108	36	7.456E 01	0.5
4	1	602.77	1379.	318.	2.37	1205.82	1195	22	2.298E 00	3.3
5	1	614.98	48.	282.	2.90	1230.20	1225	15	8.019E-02	51.8
6	1	657.20	2218.	292.	2.39	1314.59	1305	18	3.697E 00	2.4
7	1	665.20	134.	213.	2.33	1330.58	1327	12	2.227E-01	17.8

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 \*\*\*\*\* 14 DEC 1979 10:19:00 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0220T  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11369.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2227:35 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1598.	1609.	0.0116	0.0005	4.4
%-ANTIMONY	564.2	597.	56911.	0.6646	0.0031	0.5
%-ARSENIC	657.2	455.	2917.	0.1902	0.0055	2.9

1009:	114.	114.	106.	91.	115.	104.	90.	104.	127.
1018:	146.	207.	237.	275.	345.	375.	285.	251.	198.
1027:	132.	114.	114.	93.	89.	93.	94.	104.	103.
1117:	3723.	5078.	5317.	4508.	2999.	1413.	651.	687.	1891.
1126:	4589.	8397.	11083.	11506.	9492.	5995.	2563.	739.	138.
1135:	50.	48.	38.	42.	44.	47.	51.	44.	45.
1301:	30.	29.	16.	29.	25.	25.	21.	34.	26.
1310:	47.	125.	276.	472.	577.	590.	495.	267.	174.
1319:	60.	20.	29.	20.	20.	21.	16.	9.	28.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.019

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	1639.	1628.	2.97	1022.58	1015	17	2.731E 00	4.3
2	2	559.22	26416.	866.	2.28	1118.77	1109	30	4.403E 01	0.6
3	2	564.17	57964.	608.	2.28	1128.68	1109	30	9.661E 01	0.4
4	1	602.88	1703.	649.	2.32	1206.03	1195	25	2.838E 00	3.2
5	1	647.07	193.	469.	5.25	1294.35	1286	16	3.214E-01	17.6
6	1	657.19	2971.	463.	2.34	1314.57	1305	20	4.952E 00	2.1
7	1	665.46	266.	322.	2.78	1331.09	1325	16	4.426E-01	11.5

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:20:11 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 14729.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2238:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 709. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	16796.	2337.	0.0131	0.0011	8.1
Z-ANTIMONY	564.1	10097.	503931.	4.5512	0.0113	0.2
Z-ARSENIC	657.1	8453.	26685.	1.3494	0.0283	2.1

1009: 1106.	1141.	1108.	1138.	1034.	1070.	1124.	1083.	1182.
1010: 1113.	1250.	1305.	1351.	1397.	1457.	1334.	1211.	1162.
1027: 1175.	1100.	1026.	1069.	1015.	1049.	971.	1124.	1033.

1117: 37739.	48322.	48432.	39513.	24656.	12277.	6707.	9034.	21643.
1126: 47494.	79756.	99679.	98596.	78697.	47663.	20737.	6823.	2646.
1135: 1763.	1550.	1486.	1287.	1268.	1222.	1181.	1201.	1220.

1301: 469.	405.	407.	427.	441.	457.	476.	445.	547.
1310: 758.	1562.	3007.	4508.	5719.	5521.	4369.	2816.	1369.
1319: 698.	472.	440.	414.	401.	397.	363.	409.	433.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.199

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.08	2802.	20142.	2.91	1022.17	1014	16	4.670E 00	8.1
2	2	559.12	289196.	12557.	2.32	1118.58	1100	33	4.820E 02	0.2
3	2	564.08	604322.	12109.	2.33	1128.49	1100	33	1.007E 03	0.1
4	1	571.75	361.	14144.	1.61	1143.82	1140	11	6.021E-01	51.3
5	1	602.76	17162.	11210.	2.33	1205.78	1198	16	2.860E 01	1.3
6	1	645.94	1233.	6368.	2.24	1292.09	1286	13	2.056E 00	10.5
7	1	657.13	32001.	10136.	2.33	1314.44	1303	21	5.333E 01	0.8
8	1	665.38	2049.	6010.	2.66	1330.92	1325	13	3.416E 00	6.3

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:21:21 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9445.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2250:03 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2819.	1444.	0.0128	0.0007	5.9
%-ANTIMONY	564.2	831.	75615.	1.0671	0.0045	0.4
%-ARSENIC	657.2	694.	3810.	0.3019	0.0082	2.7

1009:	150.	123.	142.	140.	130.	153.	158.	141.	148.
1018:	197.	216.	247.	322.	392.	324.	338.	272.	212.
1027:	199.	163.	148.	127.	134.	131.	124.	123.	120.
1117:	5011.	6913.	7124.	6198.	4179.	1892.	867.	922.	2495.
1126:	6120.	10941.	14680.	15330.	12856.	8001.	3408.	960.	210.
1135:	74.	57.	39.	57.	55.	75.	54.	46.	63.
1301:	34.	31.	51.	40.	29.	33.	36.	38.	44.
1310:	75.	151.	333.	630.	713.	811.	645.	440.	189.
1319:	69.	36.	28.	22.	33.	22.	23.	33.	35.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.024

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	1478.	2886.	2.92	1022.63	1012	21	2.464E 00	5.8
2	2	559.23	36108.	1244.	2.29	1118.79	1110	29	6.018E 01	0.6
3	2	564.19	77400.	851.	2.28	1128.70	1110	29	1.290E 02	0.4
4	1	602.92	2272.	654.	2.32	1206.10	1197	18	3.787E 00	2.7
5	1	645.95	208.	373.	2.82	1292.11	1287	13	3.465E-01	15.0
6	1	657.24	3900.	710.	2.32	1314.66	1304	19	6.499E 00	1.9
7	1	665.56	307.	434.	2.45	1331.30	1324	16	5.112E-01	11.3

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:22:34 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9836.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2300:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2100.	1619.	0.0139	0.0007	4.8
%-ANTIMONY	564.2	525.	46841.	0.6359	0.0032	0.5
%-ARSENIC	657.2	292.	2302.	0.1760	0.0054	3.0

1009:	83.	83.	86.	93.	92.	99.	107.	87.	119.
1018:	137.	194.	240.	279.	307.	289.	270.	245.	194.
1027:	133.	112.	102.	80.	75.	77.	71.	70.	82.
1117:	3063.	4040.	4300.	3673.	2470.	1203.	576.	592.	1516.
1126:	3642.	6770.	9161.	9589.	8095.	4958.	2117.	605.	128.
1135:	40.	26.	39.	33.	27.	27.	34.	37.	33.
1301:	12.	16.	14.	17.	35.	23.	21.	20.	33.
1310:	42.	113.	222.	344.	480.	419.	369.	256.	129.
1319:	54.	14.	17.	17.	12.	17.	13.	6.	17.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.015

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	1644.	2132.	3.46	1022.53	1011	25	2.740E 00	4.7
2	2	559.22	21624.	678.	2.33	1118.79	1108	36	3.604E 01	0.7
3	2	564.19	47549.	533.	2.25	1128.72	1108	36	7.925E 01	0.5
4	1	602.82	1377.	1042.	2.30	1205.92	1194	36	2.295E 00	4.3
5	1	645.50	168.	251.	3.97	1291.21	1287	15	2.798E-01	15.5
6	1	657.20	2337.	296.	2.43	1314.58	1307	16	3.895E 00	2.3
7	1	665.37	204.	195.	2.17	1330.92	1326	16	3.397E-01	12.0

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:23:50 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 0221D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11009.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2310:51 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2340.	1610.	0.0125	0.0006	5.0
%-ANTIMONY	564.2	637.	51752.	0.6283	0.0031	0.5
%-ARSENIC	657.2	891.	2411.	0.1654	0.0055	3.3

1009:	91.	107.	109.	80.	110.	98.	103.	117.	121.
1018:	126.	204.	278.	304.	315.	328.	309.	243.	196.
1027:	147.	117.	94.	94.	96.	89.	90.	101.	88.
1117:	3038.	4384.	4665.	3876.	2604.	1289.	551.	620.	1604.
1126:	4140.	7609.	10106.	10459.	8683.	5539.	2388.	661.	139.
1135:	43.	32.	33.	37.	27.	32.	35.	50.	39.
1301:	21.	23.	15.	23.	21.	24.	22.	28.	31.
1310:	55.	112.	223.	377.	510.	538.	407.	280.	134.
1319:	47.	19.	15.	14.	14.	10.	16.	12.	23.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.017

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.99	1637.	2380.	3.29	1022.39	1011	23	2.728E 00	4.9
2	2	559.24	22517.	881.	2.26	1118.81	1110	32	3.753E 01	0.7
3	2	564.18	52622.	648.	2.28	1128.69	1110	32	8.770E 01	0.4
4	1	602.94	1506.	406.	2.27	1206.16	1197	17	2.510E 00	3.2
5	1	645.66	165.	421.	2.83	1291.52	1282	23	2.743E-01	19.4
6	1	657.22	2452.	906.	2.24	1314.63	1305	27	4.086E 00	2.7



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\*\*\*\*\* 14 DEC 1979 10:25:01 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
SAMPLE IDENTIFICATION: Q221E  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 11477.00 UNITS:  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 13DEC79 2321:13 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*  
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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*  
\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4850.	2296.	0.0172	0.0008	4.8
%-ANTIMONY	564.2	1603.	146420.	1.7099	0.0057	0.3
%-ARSENIC	657.2	1161.	7309.	0.4833	0.0114	2.4

1009:	275.	259.	241.	254.	282.	266.	276.	298.	297.
1018:	326.	416.	481.	578.	586.	615.	571.	454.	389.
1027:	340.	285.	279.	252.	274.	281.	245.	247.	237.
1117:	9626.	12810.	13560.	11390.	7343.	3665.	1714.	1945.	4913.
1126:	12107.	21435.	28557.	29541.	24478.	15287.	6624.	1908.	464.
1135:	194.	149.	141.	150.	129.	154.	146.	172.	142.
1301:	62.	62.	71.	75.	73.	68.	77.	79.	98.
1310:	165.	296.	708.	1154.	1469.	1471.	1208.	821.	367.
1319:	164.	83.	59.	62.	60.	57.	56.	57.	66.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.050

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	2410.	5090.	3.00	1022.38	1012	19	4.017E 00	4.8
2	2	559.20	69415.	2131.	2.30	1118.74	1107	33	1.157E 02	0.4
3	2	564.17	153671.	1682.	2.28	1128.67	1107	33	2.561E 02	0.3
4	1	602.82	4526.	2132.	2.37	1205.90	1197	27	7.543E 00	2.1
5	1	646.13	325.	866.	2.19	1292.46	1286	13	5.421E-01	14.3
6	1	657.21	7671.	1218.	2.35	1314.60	1306	18	1.278E 01	1.3
7	1	665.46	487.	805.	2.31	1331.09	1325	13	8.109E-01	9.6



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 \*\*\*\*\* 14 DEC 1979 10:26:13 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11403.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2331:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3050.	1830.	0.0139	0.0007	4.9
%-ANTIMONY	564.2	1126.	92542.	1.0898	0.0042	0.4
%-ARSENIC	657.2	736.	4742.	0.3171	0.0081	2.6

1009:	181.	152.	187.	181.	174.	174.	186.	186.	200.
1018:	227.	270.	318.	419.	412.	397.	381.	341.	287.
1027:	224.	170.	181.	160.	159.	147.	147.	142.	149.
1117:	6162.	8337.	8818.	7480.	4846.	2383.	1057.	1110.	3049.
1126:	7478.	13404.	18273.	18838.	15614.	9698.	4300.	1231.	278.
1135:	95.	96.	68.	59.	71.	75.	71.	80.	91.
1301:	29.	38.	48.	40.	50.	50.	53.	47.	59.
1310:	99.	190.	399.	761.	954.	1029.	821.	499.	241.
1319:	121.	37.	34.	25.	34.	26.	29.	32.	33.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.030

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	1885.	3142.	3.33	1022.56	1014	19	3.142E 00	4.9
2	2	559.22	44013.	1450.	2.28	1118.77	1108	36	7.336E 01	0.5
3	2	564.18	95360.	1160.	2.26	1128.69	1108	36	1.589E 02	0.3
4	1	602.87	2784.	1036.	2.34	1206.01	1198	20	4.640E 00	2.5
5	1	646.31	249.	479.	2.39	1292.81	1288	13	4.144E-01	14.2
6	1	657.23	4887.	759.	2.24	1314.66	1306	19	8.145E 00	1.7
7	1	665.66	473.	471.	3.43	1331.49	1325	15	7.890E-01	8.1

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:27:27 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11900.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2342:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1905.	1493.	0.0110	0.0005	4.9
%-ANTIMONY	564.2	575.	55974.	0.6328	0.0030	0.5
%-ARSENIC	657.2	360.	2785.	0.1793	0.0052	2.9

1009:	83.	116.	109.	101.	101.	121.	121.	104.	138.
1018:	149.	196.	234.	291.	343.	367.	313.	249.	174.
1027:	157.	118.	97.	110.	110.	89.	105.	115.	88.
1117:	3591.	4998.	5166.	4499.	2901.	1398.	651.	684.	1749.
1126:	4538.	8094.	10843.	11409.	9340.	5991.	2607.	748.	135.
1135:	48.	47.	31.	40.	31.	43.	39.	41.	59.
1301:	21.	10.	19.	20.	22.	17.	20.	29.	33.
1310:	73.	115.	268.	414.	573.	573.	495.	274.	134.
1319:	57.	28.	21.	20.	21.	20.	22.	30.	18.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.019

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	1520.	1940.	2.75	1022.57	1013	19	2.534E 00	4.9
2	2	559.23	25881.	796.	2.28	1118.79	1108	33	4.314E 01	0.6
3	2	564.19	57010.	586.	2.28	1128.70	1108	33	9.502E 01	0.4
4	1	571.55	125.	356.	2.70	1143.42	1140	10	2.086E-01	23.3
5	1	602.87	1737.	379.	2.19	1206.01	1198	16	2.894E 00	2.9
6	1	645.71	153.	536.	3.20	1291.62	1280	26	2.550E-01	23.1
7	1	657.21	2837.	367.	2.27	1314.61	1306	18	4.728E 00	2.1
8	1	665.44	196.	292.	2.07	1331.05	1323	14	3.266E-01	14.4

\*\*\*\*\* 14 DEC 1979 10:28:40 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11984.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 13DEC79 2352:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2114.	1342.	0.0099	0.0006	5.6
%-ANTIMONY	564.2	475.	60172.	0.6767	0.0031	0.5
%-ARSENIC	657.2	201.	2992.	0.1921	0.0053	2.8

1009:	111.	105.	106.	103.	107.	119.	127.	102.	135.
1018:	149.	175.	242.	288.	304.	303.	280.	263.	196.
1027:	166.	116.	97.	119.	117.	115.	95.	92.	94.
1117:	3788.	5178.	5543.	4661.	3096.	1490.	666.	744.	1955.
1126:	4806.	8690.	11490.	12165.	10001.	6511.	2826.	695.	147.
1135:	51.	46.	38.	33.	42.	40.	33.	43.	57.
1301:	22.	37.	22.	18.	31.	22.	26.	25.	45.
1310:	43.	136.	262.	473.	625.	626.	509.	319.	151.
1319:	54.	26.	23.	18.	25.	12.	21.	18.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.020

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	1369.	2156.	3.17	1022.60	1012	19	2.202E 00	5.6
2	2	559.23	27466.	701.	2.29	1118.79	1108	30	4.578E 01	0.6
3	2	564.19	61387.	484.	2.30	1128.71	1108	30	1.023E 02	0.4
4	3	602.82	1791.	218.	2.33	1205.91	1196	27	2.985E 00	2.7
5	3	608.87	93.	166.	1.91	1217.99	1196	27	1.548E-01	22.4
6	1	645.95	246.	275.	4.13	1292.10	1286	13	4.097E-01	11.6
7	5	657.21	3053.	205.	2.26	1314.61	1306	39	5.088E 00	1.9
8	5	665.42	209.	185.	2.16	1331.01	1306	39	3.477E-01	11.6

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:29:55 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221I  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 14558.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 3:19 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4095.	2145.	0.0132	0.0006	4.8
%-ANTIMONY	564.2	1494.	122450.	1.1358	0.0040	0.4
%-ARSENIC	657.2	510.	6071.	0.3224	0.0077	2.4

1009:	236.	218.	225.	227.	204.	244.	213.	249.	257.
1018:	290.	335.	409.	492.	522.	555.	509.	433.	363.
1027:	259.	251.	244.	226.	213.	218.	215.	208.	210.
1117:	7990.	10842.	11234.	9786.	6376.	3077.	1393.	1603.	4014.
1126:	9952.	17924.	23896.	24820.	20676.	12855.	5582.	1606.	359.
1135:	153.	118.	120.	114.	108.	90.	113.	115.	125.
1301:	49.	51.	54.	56.	67.	77.	61.	69.	72.
1310:	103.	266.	583.	969.	1232.	1301.	1051.	659.	301.
1319:	99.	66.	43.	54.	41.	49.	40.	41.	47.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.041

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.14	2232.	4262.	3.04	1022.68	1013	19	3.720E 00	4.7
2	2	559.22	57660.	1953.	2.28	1118.78	1100	35	9.610E 01	0.4
3	2	564.18	127447.	1555.	2.27	1128.68	1100	35	2.124E 02	0.3
4	1	572.34	25.	1067.	1.32	1145.00	1142	10	4.172E-02	*****
5	1	602.85	3906.	1617.	2.27	1205.97	1194	28	6.510E 00	2.2
6	1	645.96	229.	604.	2.25	1292.11	1287	11	3.824E-01	16.9
7	3	657.21	6319.	531.	2.27	1314.61	1307	34	1.053E 01	1.4
8	3	665.54	376.	369.	1.87	1331.26	1307	34	6.273E-01	9.0

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 \*\*\*\*\* 14 DEC 1979 10:31:08 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12918.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 13:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1960.	1844.	0.0129	0.0005	4.2
%-ANTIMONY	564.2	710.	57863.	0.6060	0.0028	0.5
%-ARSENIC	657.2	374.	2842.	0.1709	0.0049	2.9

1009:	125.	102.	87.	96.	102.	111.	115.	122.	147.
1018:	186.	201.	269.	328.	362.	388.	345.	293.	223.
1027:	172.	140.	113.	102.	103.	106.	96.	89.	99.
1117:	3540.	4795.	5205.	4573.	2756.	1374.	681.	724.	1811.
1126:	4639.	8481.	11247.	11712.	9846.	6171.	2596.	781.	141.
1135:	58.	44.	35.	40.	46.	38.	41.	50.	56.
1301:	20.	14.	22.	23.	26.	23.	21.	25.	39.
1310:	68.	119.	242.	431.	595.	569.	507.	300.	155.
1319:	60.	29.	17.	17.	22.	19.	26.	22.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.019

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.13	1878.	1996.	3.08	1022.67	1012	20	3.131E 00	4.1
2	2	559.24	25172.	994.	2.24	1118.81	1110	32	4.195E 01	0.7
3	2	564.19	58934.	723.	2.27	1128.70	1110	32	9.822E 01	0.4
4	1	602.90	1696.	880.	2.21	1206.08	1194	32	2.827E 00	3.5
5	1	646.61	216.	364.	4.33	1293.43	1281	21	3.603E-01	14.3
6	1	657.24	2895.	381.	2.27	1314.67	1306	17	4.825E 00	2.1
7	1	665.55	130.	327.	2.07	1331.27	1326	12	2.171E-01	21.7

\*\*\*\*\* 14 DEC 1979 10:32:19 AM \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 11:28:00  
 SAMPLE IDENTIFICATION: 0221K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12496.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 24:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	2277.	1738.	0.0127	0.0006	4.6
%-ANTIMONY	564.2	667.	68126.	0.7389	0.0032	0.4
%-ARSENIC	657.2	442.	3219.	0.2010	0.0056	2.8

1009:	98.	130.	117.	119.	117.	107.	106.	151.	157.
1018:	166.	247.	250.	320.	379.	328.	303.	254.	209.
1027:	173.	132.	140.	112.	109.	105.	95.	83.	114.
1117:	4168.	5772.	5948.	5134.	3421.	1656.	750.	843.	2071.
1126:	5455.	9799.	13320.	13968.	11643.	7237.	3051.	890.	181.
1135:	76.	44.	52.	45.	40.	47.	51.	56.	48.
1301:	9.	27.	32.	34.	29.	32.	21.	36.	41.
1310:	64.	154.	256.	481.	679.	628.	557.	355.	191.
1319:	74.	38.	16.	28.	26.	25.	17.	28.	37.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.022

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.95	1776.	2327.	3.30	1022.30	1012	22	2.960E 00	4.6
2	2	559.23	30055.	916.	2.29	1118.79	1108	33	5.009E 01	0.6
3	2	564.19	69618.	682.	2.25	1128.71	1108	33	1.160E 02	0.4
4	1	602.85	2067.	639.	2.23	1205.97	1194	20	3.444E 00	2.8
5	1	645.89	183.	617.	3.18	1291.98	1284	23	3.045E-01	20.8
6	1	657.24	3290.	452.	2.32	1314.67	1307	17	5.483E 00	2.0
7	1	665.38	273.	276.	2.83	1330.92	1325	13	4.548E-01	10.6

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 \*\*\*\*\* 14 DEC 1979 10:33:30 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 14801.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 34:46 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2052.	1631.	0.0101	0.0005	4.7
%-ANTIMONY	564.2	685.	61671.	0.5658	0.0026	0.5
%-ARSENIC	657.2	189.	2928.	0.1550	0.0043	2.8

1009:	92.	125.	121.	114.	120.	104.	122.	156.	122.
1018:	159.	210.	267.	308.	368.	380.	325.	278.	191.
1027:	170.	134.	117.	103.	108.	90.	100.	98.	106.
1117:	3780.	5231.	5502.	4784.	2979.	1538.	660.	710.	1947.
1126:	4901.	8863.	11860.	12817.	10416.	6648.	2836.	756.	167.
1135:	51.	45.	37.	25.	32.	35.	43.	55.	47.
1301:	21.	17.	29.	21.	23.	25.	21.	38.	31.
1310:	60.	119.	254.	459.	611.	657.	494.	302.	151.
1319:	51.	23.	21.	22.	21.	15.	17.	25.	18.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.020

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	1664.	2093.	2.88	1022.58	1013	19	2.773E 00	4.6
2	2	559.23	27107.	900.	2.25	1118.80	1109	34	4.518E 01	0.6
3	2	564.20	62916.	699.	2.26	1128.72	1109	34	1.049E 02	0.4
4	1	602.83	1889.	482.	2.22	1205.93	1197	18	3.148E 00	2.9
5	1	645.99	267.	293.	4.33	1292.18	1287	14	4.449E-01	11.0
6	3	657.22	2987.	193.	2.18	1314.63	1304	37	4.978E 00	2.0
7	3	665.70	224.	220.	2.62	1331.57	1304	37	3.726E-01	11.6



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 \*\*\*\*\* 14 DEC 1979 10:34:42 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9552.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 45:13 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1431.	1040.	0.0101	0.0006	6.0
%-ANTIMONY	564.2	692.	44619.	0.6354	0.0033	0.5
%-ARSENIC	657.2	117.	2180.	0.1797	0.0054	3.0

1009:	86.	84.	95.	82.	82.	74.	90.	98.	93.
1010:	112.	148.	181.	207.	240.	269.	209.	173.	144.
1027:	104.	101.	77.	83.	74.	88.	68.	84.	64.
1117:	2781.	3922.	4162.	3512.	2278.	1159.	450.	532.	1432.
1126:	3539.	6446.	8826.	9197.	7757.	4645.	2096.	560.	106.
1135:	39.	26.	25.	32.	21.	34.	26.	34.	22.
1301:	21.	17.	15.	16.	14.	19.	22.	26.	43.
1310:	33.	93.	185.	344.	455.	458.	373.	210.	113.
1319:	48.	22.	12.	8.	16.	16.	20.	24.	16.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.015

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	1055.	1453.	2.85	1022.49	1014	18	1.759E 00	6.0
2	2	559.24	19958.	845.	2.24	1118.81	1109	56	3.326E 01	0.7
3	2	564.19	45294.	702.	2.24	1128.71	1109	56	7.549E 01	0.5
4	1	602.82	1466.	370.	2.38	1205.91	1198	16	2.443E 00	3.2
5	1	645.62	189.	240.	3.14	1291.44	1284	15	3.148E-01	13.8
6	3	657.21	2213.	119.	2.23	1314.60	1304	37	3.688E 00	2.3
7	3	665.35	201.	149.	3.00	1330.87	1304	37	3.354E-01	11.2



\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:35:54 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9932.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 55:35 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.L1B1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 95.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2208.	1068.	0.0101	0.0007	7.0
%-ANTIMONY	564.2	537.	48287.	0.6626	0.0033	0.5
%-ARSENIC	657.2	350.	2412.	0.1920	0.0058	3.0
1009:	77. 82. 78. 94. 98. 89. 98. 101. 97.					
1018:	119. 146. 200. 225. 249. 275. 233. 206. 159.					
1027:	123. 106. 102. 84. 99. 81. 77. 68. 74.					
1117:	2923. 4159. 4458. 3745. 2464. 1142. 489. 568. 1453.					
1126:	3870. 6960. 9299. 9931. 8202. 5219. 2188. 636. 131.					
1135:	38. 28. 33. 30. 31. 26. 30. 38. 35.					
1301:	18. 22. 16. 22. 25. 31. 18. 29. 24.					
1310:	43. 82. 235. 370. 456. 451. 428. 263. 116.					
1319:	46. 25. 14. 17. 15. 21. 16. 16. 16.					

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.017

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	1086.	2245.	2.93	1022.65	1015	24	1.811E 00	6.9
2	2	559.24	21308.	724.	2.22	1118.82	1108	35	3.551E 01	0.7
3	2	564.20	49099.	546.	2.27	1128.72	1108	35	8.183E 01	0.5
4	1	602.90	1478.	470.	2.33	1206.08	1196	21	2.464E 00	3.4
5	1	645.89	110.	226.	2.36	1291.98	1288	11	1.836E-01	21.7
6	1	657.23	2452.	356.	2.42	1314.65	1303	20	4.087E 00	2.3
7	1	665.53	128.	201.	1.96	1331.23	1327	11	2.128E-01	18.2

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:37:06 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 02210  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 15000.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 105:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2557.	2161.	0.0136	0.0005	4.0
%-ANTIMONY	564.2	726.	66318.	0.6036	0.0027	0.4
%-ARSENIC	657.3	486.	3202.	0.1696	0.0048	2.8

1009:	141.	128.	145.	117.	122.	93.	124.	131.	158.
1010:	181.	270.	338.	392.	465.	441.	389.	332.	234.
1027:	181.	174.	109.	106.	114.	100.	122.	118.	117.
1117:	4025.	5630.	5923.	4996.	3413.	1697.	673.	835.	2049.
1126:	5147.	9547.	13054.	13934.	11158.	7082.	3085.	829.	169.
1135:	54.	51.	59.	50.	44.	48.	45.	63.	54.
1301:	16.	29.	27.	28.	24.	29.	30.	27.	26.
1310:	50.	129.	290.	478.	647.	672.	569.	358.	164.
1319:	59.	38.	18.	28.	15.	25.	24.	24.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.022

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	2209.	2613.	3.05	1022.43	1011.	21	3.681E 00	3.9
2	2	559.24	29577.	930.	2.30	1118.81	1108	35	4.929E 01	0.6
3	2	564.19	67770.	741.	2.23	1128.71	1108	35	1.130E 02	0.4
4	1	602.89	1977.	572.	2.23	1206.05	1198	16	3.295E 00	2.9
5	1	646.11	145.	754.	2.84	1292.43	1283	24	2.422E-01	28.3
6	1	657.25	3272.	497.	2.28	1314.69	1307	18	5.453E 00	2.0
7	1	665.63	194.	399.	2.29	1331.43	1325	15	3.227E-01	16.4

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:38:13 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221P  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9436.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 116:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 609. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1623.	1115.	0.0113	0.0007	6.0
%-ANTIMONY	564.2	493.	46923.	0.6802	0.0035	0.5
%-ARSENIC	657.3	297.	2169.	0.1835	0.0057	3.1

1009:	87.	78.	79.	86.	97.	81.	92.	103.	111.
1018:	110.	131.	193.	213.	247.	267.	219.	180.	141.
1027:	114.	108.	91.	77.	78.	62.	76.	71.	73.
1117:	2867.	3845.	4145.	3407.	2362.	1142.	514.	554.	1428.
1126:	3683.	6725.	9153.	9562.	7899.	5150.	2170.	618.	128.
1135:	40.	31.	25.	26.	32.	31.	20.	27.	37.
1301:	20.	21.	13.	17.	24.	18.	22.	19.	17.
1310:	31.	100.	207.	316.	405.	443.	395.	224.	116.
1319:	50.	21.	17.	16.	21.	15.	11.	16.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.015

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	1132.	1647.	2.86	1022.54	1011	22	1.887E 00	5.9
2	2	559.23	20163.	723.	2.28	1118.90	1109	31	3.361E 01	0.7
3	2	564.20	47632.	501.	2.27	1128.72	1109	31	7.939E 01	0.5
4	1	602.94	1499.	340.	2.52	1206.14	1197	20	2.498E 00	3.1
5	1	657.26	2202.	301.	2.37	1314.70	1307	18	3.670E 00	2.4
6	1	665.60	191.	140.	3.10	1331.38	1325	12	3.189E-01	11.4

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:39:23 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 02210  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11910.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 126:46 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1484.	1586.	0.0128	0.0006	4.3
%-ANTIMONY	564.2	506.	59379.	0.6832	0.0032	0.5
%-ARSENIC	657.3	395.	2955.	0.1989	0.0057	2.8

1009:	117.	113.	82.	115.	127.	102.	90.	126.	112.
1018:	151.	194.	243.	296.	293.	280.	289.	256.	182.
1027:	144.	127.	104.	75.	104.	97.	101.	90.	107.
1117:	3711.	4960.	5264.	4546.	2996.	1484.	686.	744.	1782.
1126:	4615.	8513.	11496.	12252.	10152.	6384.	2729.	700.	161.
1135:	54.	32.	44.	45.	38.	38.	36.	45.	49.
1301:	16.	26.	34.	29.	39.	31.	23.	36.	38.
1310:	51.	111.	238.	479.	558.	615.	518.	337.	152.
1319:	38.	36.	23.	22.	20.	19.	23.	15.	20.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.019

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	1616.	1511.	3.53	1022.51	1015	16	2.693E 00	4.3
2	2	559.24	26444.	658.	2.30	1118.81	1108	34	4.407E 01	0.6
3	2	564.20	60477.	515.	2.25	1128.73	1108	34	1.008E 02	0.4
4	1	602.85	1765.	550.	2.25	1205.97	1199	20	2.941E 00	3.1
5	1	645.88	141.	522.	2.19	1291.96	1286	19	2.350E-01	24.6
6	1	657.26	3009.	403.	2.31	1314.70	1307	17	5.015E 00	2.1
7	1	665.58	201.	251.	2.57	1331.33	1326	12	3.352E-01	13.3

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:40:35 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9925.000 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 137:12 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1819.	1345.	0.0132	0.0007	5.3
%-ANTIMONY	564.2	815.	67490.	0.9336	0.0041	0.4
%-ARSENIC	657.2	248.	3250.	0.2637	0.0071	2.7

1009:	121.	117.	102.	110.	136.	108.	121.	106.	128.
1018:	143.	160.	248.	289.	273.	289.	277.	245.	195.
1027:	147.	141.	94.	105.	95.	104.	109.	103.	139.
1117:	4255.	5800.	6011.	5227.	3555.	1775.	790.	794.	2025.
1126:	5039.	9828.	13170.	13709.	11585.	7429.	3145.	887.	174.
1135:	69.	59.	43.	48.	48.	48.	44.	47.	65.
1301:	23.	16.	29.	34.	26.	34.	30.	32.	34.
1310:	64.	129.	309.	495.	665.	649.	566.	362.	183.
1319:	54.	24.	25.	12.	16.	21.	27.	15.	32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.022

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	1375.	1859.	3.32	1022.54	1015	17	2.291E 00	5.2
2	2	559.24	30532.	1100.	2.31	1118.82	1110	33	5.089E 01	0.6
3	2	564.21	68968.	832.	2.26	1128.74	1110	33	1.149E 02	0.4
4	1	602.91	2089.	546.	2.26	1206.08	1194	23	3.482E 00	2.7
5	4	657.23	3321.	253.	2.34	1314.65	1307	34	5.534E 00	1.9
6	4	665.29	202.	263.	2.51	1330.76	1307	34	3.374E-01	13.5

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:41:46 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q2215  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12933.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 147:39 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1975.	1618.	0.0123	0.0006	4.7
%-ANTIMONY	564.2	516.	58193.	0.6189	0.0029	0.5
%-ARSENIC	657.2	423.	2868.	0.1795	0.0052	2.9

1009:	114.	116.	96.	84.	100.	103.	124.	119.	135.
1018:	143.	200.	246.	288.	343.	366.	326.	265.	196.
1027:	160.	124.	108.	112.	94.	100.	111.	83.	113.
1117:	3561.	5094.	5462.	4663.	2967.	1458.	660.	693.	1712.
1126:	4364.	8491.	11480.	11849.	9781.	6276.	2782.	761.	171.
1135:	50.	35.	23.	39.	39.	49.	45.	44.	50.
1301:	25.	31.	22.	28.	26.	30.	23.	31.	37.
1310:	59.	125.	241.	449.	619.	569.	505.	293.	144.
1319:	64.	27.	19.	20.	19.	16.	16.	31.	25.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.019

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	1648.	2012.	2.97	1022.63	1013	20	2.746E 00	4.6
2	2	559.24	26535.	733.	2.25	1118.82	1108	31	4.422E 01	0.6
3	2	564.19	59270.	525.	2.25	1128.72	1108	31	9.878E 01	0.4
4	1	602.84	1745.	484.	2.10	1205.95	1197	19	2.909E 00	3.0
5	1	646.36	122.	463.	3.20	1292.93	1283	17	2.040E-01	26.7
6	1	657.21	2922.	431.	2.25	1314.61	1305	19	4.869E 00	2.1
7	1	665.56	229.	333.	2.19	1331.29	1324	17	3.810E-01	13.2

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:42:58 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: Q221T  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10789.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 158:05 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	1535.	1444.	0.0133	0.0006	4.7
%-ANTIMONY	564.2	454.	51649.	0.6597	0.0032	0.5
%-ARSENIC	657.3	217.	2360.	0.1778	0.0053	3.0

1009:	100.	88.	87.	84.	110.	99.	79.	92.	119.
1018:	127.	182.	205.	266.	282.	292.	282.	241.	167.
1027:	123.	124.	102.	91.	79.	81.	82.	82.	73.
1117:	3184.	4236.	4541.	4000.	2660.	1257.	562.	597.	1488.
1126:	3961.	7403.	10162.	10551.	8912.	5514.	2412.	674.	131.
1135:	34.	42.	35.	29.	35.	39.	42.	34.	34.
1301:	27.	23.	25.	21.	31.	25.	27.	26.	35.
1310:	51.	101.	236.	334.	488.	490.	427.	278.	115.
1319:	56.	23.	20.	16.	18.	8.	18.	21.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.017

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.14	1468.	1560.	3.23	1022.69	1015	18	2.446E 00	4.7
2	2	559.25	22751.	608.	2.29	1118.84	1108	32	3.792E 01	0.7
3	2	564.20	52517.	462.	2.24	1128.73	1108	32	8.753E 01	0.4
4	1	602.88	1573.	427.	2.25	1206.02	1198	20	2.622E 00	3.2
5	1	646.11	124.	307.	2.19	1292.42	1287	13	2.066E-01	22.1
6	5	657.26	2399.	220.	2.31	1314.70	1306	35	3.999E 00	2.2
7	5	665.52	188.	256.	2.82	1331.22	1306	35	3.131E-01	14.2



\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:44:10 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: S626A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 17425.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 208:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4338.	13742.	0.0789	0.0010	1.3
%-ANTIMONY	564.2	3231.	89943.	0.7126	0.0029	0.4
%-ARSENIC	657.3	162.	127.	0.0060	0.0010	16.8

1009:	119.	133.	126.	137.	137.	166.	204.	265.	354.
1010:	533.	979.	1415.	1801.	2169.	2191.	1961.	1510.	990.
1027:	598.	322.	225.	157.	119.	119.	100.	102.	105.
1117:	260.	272.	317.	319.	320.	333.	442.	890.	2608.
1126:	6610.	13061.	17208.	18450.	15564.	10121.	4348.	1315.	252.
1135:	60.	40.	49.	33.	45.	44.	33.	33.	37.
1301:	16.	19.	13.	19.	11.	16.	21.	12.	12.
1310:	17.	20.	23.	28.	32.	40.	31.	29.	22.
1319:	10.	13.	17.	8.	23.	16.	15.	12.	12.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.022

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	14043.	4433.	3.10	1022.60	1011	37	2.341E 01	1.1
2	1	564.22	91913.	3302.	2.27	1128.77	1120	18	1.532E 02	0.3
3	1	602.05	2703.	644.	2.20	1205.97	1197	26	4.505E 00	2.4
4	1	646.01	212.	290.	2.10	1292.22	1286	18	3.542E-01	13.4
5	1	657.30	130.	166.	2.61	1314.78	1309	12	2.168E-01	16.7



\*\*\*\*\*  
\*\*\*\*\* 14 DEC 1979 10:45:19 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
SAMPLE IDENTIFICATION: S626B  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 17553.00 UNITS:  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 14DEC79 218:54 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3704.	13106.	0.0754	0.0010	1.3
%-ANTIMONY	564.2	3245.	89981.	0.7090	0.0028	0.4
%-ARSENIC	657.2	149.	102.	0.0048	0.0009	19.7

1009:	131.	109.	137.	146.	147.	138.	181.	269.	395.
1018:	580.	920.	1263.	1805.	2105.	2114.	1901.	1463.	961.
1027:	622.	354.	228.	162.	139.	117.	101.	107.	103.
1117:	238.	264.	310.	335.	302.	327.	446.	899.	2633.
1126:	6829.	12589.	17336.	18345.	15514.	10309.	4616.	1391.	241.
1135:	77.	47.	50.	48.	36.	34.	38.	40.	37.
1301:	23.	15.	16.	19.	17.	17.	15.	15.	14.
1310:	10.	12.	14.	15.	33.	23.	29.	20.	22.
1319:	12.	13.	18.	14.	21.	13.	12.	15.	10.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.022

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	13393.	3785.	3.04	1022.63	1011	32	2.232E 01	1.1
2	1	564.23	91951.	3316.	2.28	1128.79	1121	18	1.533E 02	0.3
3	1	602.90	2993.	451.	2.30	1206.07	1196	18	4.988E 00	2.1
4	1	645.84	221.	308.	2.42	1291.89	1284	17	3.676E-01	13.3
5	1	657.20	104.	152.	2.65	1314.58	1311	11	1.737E-01	19.6

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:46:31 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: S626C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13948.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 229:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2184.	10964.	0.0001	0.0010	1.3
%-ANTIMONY	564.2	463.	74782.	0.7429	0.0031	0.4
%-ARSENIC	657.4	145.	84.	0.0049	0.0011	23.2

1009:	110.	105.	99.	114.	113.	131.	191.	182.	299.
1018:	454.	693.	1118.	1513.	1765.	1692.	1557.	1239.	799.
1027:	478.	299.	198.	137.	117.	75.	98.	85.	75.
1117:	200.	244.	232.	256.	254.	266.	402.	739.	2106.
1126:	5508.	10554.	14066.	15066.	12878.	8346.	3834.	1177.	216.
1135:	44.	47.	35.	22.	28.	22.	24.	29.	31.
1301:	14.	20.	10.	21.	16.	8.	15.	18.	14.
1310:	14.	12.	17.	22.	27.	38.	25.	20.	7.
1319:	12.	16.	16.	9.	16.	9.	9.	9.	10.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.017

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	11148.	2221.	3.06	1022.62	1011	24	1.858E 01	1.1
2	9	559.81	1121.	383.	1.34	1119.96	1108	36	1.868E 00	3.9
3	9	564.23	76039.	470.	2.30	1128.79	1108	36	1.267E 02	0.4
4	1	602.92	2255.	1261.	2.22	1206.11	1194	57	3.758E 00	3.1
5	1	657.38	85.	147.	2.04	1314.95	1311	10	1.416E-01	23.1

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:47:38 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 5604A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 15259.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 239:43 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3480.	972.	0.0066	0.0006	9.2
%-ANTIMONY	564.2	1356.	183289.	1.6675	0.0052	0.3
%-ARSENIC	657.3	778.	1797.	0.0975	0.0037	3.8

1009:	234.	244.	269.	230.	208.	222.	262.	226.	250.
1018:	247.	281.	307.	345.	369.	362.	314.	305.	293.
1027:	254.	248.	218.	222.	229.	235.	179.	250.	193.
1117:	2633.	3326.	3720.	3180.	2291.	1391.	1154.	2041.	5713.
1126:	14455.	26652.	35462.	36593.	30636.	19552.	8779.	2631.	572.
1135:	192.	134.	142.	128.	128.	117.	88.	95.	108.
1301:	42.	34.	47.	47.	47.	52.	52.	44.	41.
1310:	71.	104.	185.	302.	390.	445.	336.	228.	129.
1319:	59.	51.	54.	43.	36.	43.	40.	43.	45.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.044

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	1015.	3634.	3.19	1022.45	1014	16	1.692E 00	9.2
2	2	559.27	18508.	2027.	2.39	1118.88	1108	35	3.085E 01	0.8
3	2	564.19	191406.	1416.	2.30	1128.70	1108	35	3.190E 02	0.2
4	1	602.87	5852.	1067.	2.28	1206.02	1190	18	9.753E 00	1.6
5	1	645.91	449.	799.	2.40	1292.02	1284	18	7.481E-01	10.3
6	1	657.26	1877.	812.	2.20	1314.71	1307	17	3.128E 00	3.2

\*\*\*\*\*  
 \*\*\*\*\* 14 DEC 1979 10:48:49 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: S604B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13012.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 14DEC79 250:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	2576.	828.	0.0066	0.0006	9.4
%-ANTIMONY	564.2	1011.	150782.	1.6117	0.0053	0.3
%-ARSENIC	657.2	595.	1518.	0.0970	0.0038	3.9

1009:	203.	217.	198.	193.	196.	198.	173.	208.	167.
1018:	222.	226.	257.	313.	321.	310.	267.	235.	245.
1027:	207.	191.	182.	182.	179.	175.	191.	174.	169.
1117:	2199.	2076.	3032.	2593.	1885.	1187.	1001.	1590.	4683.
1126:	11738.	21861.	29217.	30025.	25382.	16104.	7204.	2092.	438.
1135:	143.	90.	82.	73.	73.	99.	77.	76.	73.
1301:	31.	24.	36.	36.	26.	35.	36.	32.	37.
1310:	51.	80.	146.	259.	319.	305.	287.	188.	98.
1319:	51.	36.	30.	32.	33.	24.	33.	27.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.036

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.95	858.	2668.	2.99	1022.31	1017	14	1.430E 00	9.3
2	2	559.25	15785.	1536.	2.49	1118.84	1107	33	2.631E 01	0.9
3	2	564.19	156153.	1047.	2.29	1128.71	1107	33	2.603E 02	0.3
4	1	602.86	4699.	849.	2.25	1205.98	1199	17	7.832E 00	1.7
5	1	645.95	421.	576.	3.16	1292.09	1283	19	7.023E-01	9.6
6	1	657.24	1572.	616.	2.36	1314.67	1305	20	2.620E 00	3.4

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 \*\*\*\*\* 14 DEC 1979 10:50:00 AM \*\*\*\*\*  
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91119065 QY RF

SAMPLE DATE: 13DEC79 1128:00  
 SAMPLE IDENTIFICATION: 5604C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11960.00 UNITS:  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 14DEC79 300:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	2758.	739.	0.0065	0.0007	10.7
%-ANTIMONY	564.2	1039.	151773.	1.7682	0.0058	0.3
%-ARSENIC	657.2	646.	1534.	0.1072	0.0043	4.0

1009:	184.	218.	208.	171.	191.	203.	194.	190.	197.
1018:	214.	253.	260.	311.	309.	307.	285.	228.	248.
1027:	191.	208.	195.	209.	173.	194.	186.	166.	181.
1117:	2225.	2838.	3086.	2655.	1867.	1220.	1005.	1683.	4586.
1126:	11816.	22009.	29362.	30651.	25584.	16190.	7144.	2114.	420.
1135:	152.	90.	102.	89.	90.	91.	81.	64.	86.
1301:	28.	34.	37.	20.	32.	32.	41.	32.	37.
1310:	35.	84.	164.	252.	338.	315.	280.	205.	95.
1319:	48.	39.	29.	25.	33.	34.	42.	32.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.036

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.89	765.	2856.	3.03	1022.18	1016	14	1.275E 00	10.7
2	2	559.27	15865.	1593.	2.48	1118.87	1107	36	2.644E 01	0.9
3	2	564.19	157179.	1076.	2.28	1128.71	1107	36	2.620E 02	0.3
4	1	602.86	4849.	1408.	2.35	1206.00	1195	32	8.082E 00	1.8
5	1	645.96	440.	541.	2.63	1292.13	1283	18	7.328E-01	9.0
6	1	657.24	1588.	669.	2.37	1314.66	1308	19	2.647E 00	3.5
7	1	665.64	141.	355.	2.56	1331.46	1327	10	2.347E-01	21.1

2

Lab # 91119065 SQY

2<sup>nd</sup> Irradiation  
12/17/79

SAMPLE	SAM. WT.	%-COPPER	%-ANTIMONY	%-ARSENIC
Q180A	12282.000	0.03797	0.73165	0.00564
Q180B	9076.000	0.03776	0.72960	0.00977
Q180C	10304.000	0.03692	0.73447	0.00640
		0.03755 AVG	0.73191 AVG	0.00727 AVG
		0.000552 SD	0.002445 SD	0.002199 SD
		1.469810 %RSD	0.334002 %RSD	30.235859 %RSD
Q181A	9393.000	0.06951	1.09656	0.00699
Q181B	10752.000	0.05444	0.82336	0.00531
Q181C	9047.000	0.05690	0.85514	0.00499
		0.06028 AVG	0.92502 AVG	0.00576 AVG
		0.000084 SD	0.149407 SD	0.001076 SD
		13.409646 %RSD	16.151731 %RSD	18.663805 %RSD
Q182	4693.000	0.05799	0.84482	0.00651
Q184A	7978.000	0.04907	0.79183	0.00519
Q184B	8278.000	0.04983	0.81267	0.00526
Q184C	10290.000	0.04807	0.80929	0.00636
		0.04899 AVG	0.80460 AVG	0.00560 AVG
		0.000885 SD	0.011188 SD	0.000660 SD
		1.806434 %RSD	1.390501 %RSD	11.769661 %RSD
Q185	3972.000	0.00629	2.56102	0.04187
Q186A	11166.000	0.05743	0.85444	0.00493
Q186B	9268.000	0.05583	0.82070	0.00523
Q186C	8736.000	0.05703	0.80988	0.00440
		0.05676 AVG	0.82834 AVG	0.00485 AVG
		0.000830 SD	0.023245 SD	0.000421 SD
		1.462595 %RSD	2.806169 %RSD	8.681105 %RSD
Q187A	12924.000	0.03161	0.69261	0.01018
Q187B	9631.000	0.03201	0.68483	0.00944
Q187C	10080.000	0.03042	0.68240	0.00758
		0.03135 AVG	0.68661 AVG	0.00907 AVG
		0.000825 SD	0.005330 SD	0.001335 SD
		2.632815 %RSD	0.776296 %RSD	14.728997 %RSD
Q188	8304.000	0.03686	0.87606	0.00997
Q189A	10081.000	0.04487	0.75953	0.00535
Q189B	11256.000	0.04629	0.81977	0.00703
Q189C	8261.000	0.04782	0.82588	0.00816
		0.04633 AVG	0.80173 AVG	0.00685 AVG
		0.001478 SD	0.036675 SD	0.001413 SD
		3.189529 %RSD	4.574474 %RSD	20.636072 %RSD
Q190A	10315.000	0.05456	0.85442	0.00306
Q190B	9384.000	0.05451	0.87010	0.00465

Q190C	9476.000	0.05432	0.82192	<	0.00307
		0.05446 AVG	0.84877 AVG		0.00465 AVG
		0.000122 SD	0.024374 SD		0.000000 SD
		0.223980 %RSD	2.895084 %RSD		0.000000 %RSD
Q191A	9958.000	0.04062	0.74726		0.00657
Q191B	9431.000	0.04106	0.79812		0.00754
Q191C	9965.000	0.04423	0.86599		0.00766
		0.04197 AVG	0.80379 AVG		0.00726 AVG
		0.001972 SD	0.059569 SD		0.000597 SD
		4.699369 %RSD	7.410927 %RSD		8.228967 %RSD
Q192	8390.000	0.04109	0.78169		0.00800
Q193A	7935.000	0.03580	0.71861		0.00922
Q193B	4479.000	0.03499	0.72818		0.00884
Q193C	5517.000	0.03657	0.72227		0.01293
		0.03579 AVG	0.72302 AVG		0.01033 AVG
		0.000788 SD	0.004825 SD		0.002259 SD
		2.200069 %RSD	0.667310 %RSD		21.863016 %RSD
Q194A	8967.000	0.03721	0.79171		0.00876
Q194B	6584.000	0.03016	0.78651		0.00926
Q194C	6983.000	0.04672	0.99405		0.00965
		0.04070 AVG	0.85742 AVG		0.00922 AVG
		0.005238 SD	0.118351 SD		0.000442 SD
		12.870483 %RSD	13.803031 %RSD		4.796295 %RSD
Q195A	10493.000	0.06098	0.73921	<	0.00259
Q195B	8478.000	0.06637	0.81711	<	0.00314
Q195C	9268.000	0.06317	0.75097	<	0.00268
		0.06351 AVG	0.76910 AVG		0.00000 AVG
		0.002713 SD	0.041993 SD		0.000000 SD
		4.272680 %RSD	5.459901 %RSD		0.000000 %RSD
Q196	1337.000	0.08699	0.60581	<	0.01051
Q197	7212.000	0.01259	0.85547		0.15898
Q198	10404.000	0.01203	0.86069		0.16713
Q199	8404.000	0.01903	1.48253		0.29856
Q200	9078.000	0.01272	0.81247		0.15564
Q201	9615.000	0.01979	1.43543		0.28580
Q202A	5536.000	0.00243	0.01387	<	0.00218
Q202B	6276.000	0.00178	0.01488	<	0.00193
Q202C	10873.000	0.00158	0.01525	<	0.00116
		0.00193 AVG	0.01467 AVG		0.00000 AVG
		0.000444 SD	0.000711 SD		0.000000 SD
		23.000334 %RSD	4.849771 %RSD		0.000000 %RSD



Q203A	11501.000	0.00239	0.12452	<	0.00121
Q203B	11191.000	0.00272	0.13319	<	0.00146
Q203C	12103.000	0.00223	0.12177	<	0.00125
		0.00245 AVG	0.12635 AVG		0.00000 AVG
		0.000255 SD	0.006126 SD		0.000000 SD
		10.408551 %RSD	4.848546 %RSD		0.000000 %RSD
Q204A	8918.000	0.03968	0.00224	<	0.00147
Q204B	9279.000	0.03286	0.00152	<	0.00157
Q204C	11976.000	0.03235	0.00154	<	0.00103
		0.03497 AVG	0.00177 AVG		0.00000 AVG
		0.004093 SD	0.000408 SD		0.000000 SD
		11.705938 %RSD	23.124815 %RSD		0.000000 %RSD
Q205A	9347.000	0.00313	0.13807	<	0.00172
Q205B	8898.000	0.00306	0.16365	<	0.00188
Q205C	9437.000	0.00303	0.14546	<	0.00168
		0.00307 AVG	0.14906 AVG		0.00000 AVG
		0.000054 SD	0.013167 SD		0.000000 SD
		1.742533 %RSD	8.833176 %RSD		0.000000 %RSD
S626A	10957.000	0.07748	0.72139		0.00471
S626B	10664.000	0.07609	0.71966	<	0.00353
S626C	8908.000	0.08103	0.71869	<	0.00332
		0.07820 AVG	0.71992 AVG		0.00471 AVG
		0.002547 SD	0.001368 SD		0.000000 SD
		3.256817 %RSD	0.189992 %RSD		0.000000 %RSD
S604A	8652.000	0.00614	1.84138		0.09751
S604B	9725.000	0.00860	1.88257		0.09853
S604C	9177.000	0.00690	1.90123		0.10379
		0.00721 AVG	1.87506 AVG		0.09994 AVG
		0.001259 SD	0.030625 SD		0.003368 SD
		17.470303 %RSD	1.633261 %RSD		3.370013 %RSD

(TI)TITLE:  
 91119065 RF LEAD-SECOND IRRADIATION  
 (LN)LIBRARY:  
 (SA)SAMPLE TIME: 17DEC79 1017:00  
 (SE)STD ENERGY TOLERANCE: 1.75  
 (UE)UNK ENERGY TOLERANCE: 1.75  
 (TF)THERMAL FLUX: 0.0000E-01  
 (EF)EPITHERMAL FLUX: 0.0000E-01  
 (FF)FAST FLUX: 0.0000E-01  
 (QU)UNITS: UG

	ELEMENT	ENERGY	HALF-LIFE	SEC
1	%-COPPER	511.00	1.2700E 01 H	4.5720E 04
2	%-ANTIMONY	565.00	2.7200E 00 D	2.3501E 05
3	%-ARSENIC	657.40	2.6300E 01 H	9.4600E 04

#### STANDARD SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626A	10957.00	FBI1 .A01	100.0	100000.0
2	S626B	10664.00	FBI1 .A02	100.0	100000.0
3	S626C	8900.00	FBI1 .A03	100.0	100000.0
4	S604A	8652.00	FBI1 .A04	100.0	100000.0
5	S604B	9725.00	FBI1 .A05	100.0	100000.0
6	S604C	9177.00	FBI1 .A06	100.0	100000.0

STD: 1 S626A FILE= FBI1 .A01

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	565.00	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.40	0.0000E-01	0.0000E-01

STD: 2 S626B FILE= FBI1 .A02

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	565.00	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.40	0.0000E-01	0.0000E-01

STD: 3 S626C FILE= FBI1 .A03

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	565.00	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.40	0.0000E-01	0.0000E-01

STD: 4 S604A FILE= FBI1 .A04

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	565.00	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.40	1.0000E-01	0.0000E-01

STD: 5 S604B FILE= FBI1 .A05

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	565.00	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.40	1.0000E-01	0.0000E-01

STD: 6 5604C

FILE= FB11 .A06

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	565.00	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.40	1.0000E-01	0.0000E-01

# UNKNOWN SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	Q180A	12282.00	FB11 .A07	100.0	100000.0
2	Q180B	9076.00	FB11 .A08	100.0	100000.0
3	Q180C	10304.00	FB11 .A09	100.0	100000.0
4	Q181A	9393.00	FB11 .A10	100.0	100000.0
5	Q181B	10752.00	FB11 .A11	100.0	100000.0
6	Q181C	9047.00	FB11 .A12	100.0	100000.0
7	Q182	4693.00	FB11 .A13	100.0	100000.0
8	Q184A	7978.00	FB11 .A14	100.0	100000.0
9	Q184B	8278.00	FB11 .A15	100.0	100000.0
10	Q184C	10298.00	FB11 .A16	100.0	100000.0
11	Q185	3972.00	FB11 .A17	100.0	100000.0
12	Q186A	11166.00	FB11 .A18	100.0	100000.0
13	Q186B	9268.00	FB11 .A19	100.0	100000.0
14	Q186C	8736.00	FB11 .A20	100.0	100000.0
15	Q187A	12924.00	FB11 .A21	100.0	100000.0
16	Q187B	9631.00	FB11 .A22	100.0	100000.0
17	Q187C	10080.00	FB11 .A23	100.0	100000.0
18	Q188	8304.00	FB11 .A24	100.0	100000.0
19	Q189A	10081.00	FB11 .A25	100.0	100000.0
20	Q189B	11256.00	FB11 .A26	100.0	100000.0
21	Q189C	8261.00	FB11 .A27	100.0	100000.0
22	Q190A	10315.00	FB11 .A28	100.0	100000.0
23	Q190B	9384.00	FB11 .A29	100.0	100000.0
24	Q190C	9476.00	FB11 .A30	100.0	100000.0
25	Q191A	9958.00	FB11 .A31	100.0	100000.0
26	Q191B	9431.00	FB11 .A32	100.0	100000.0
27	Q191C	9965.00	FB11 .A33	100.0	100000.0
28	Q192	8390.00	FB11 .A34	100.0	100000.0
29	Q193A	7935.00	FB11 .A35	100.0	100000.0
30	Q193B	4479.00	FB11 .A36	100.0	100000.0
31	Q193C	5517.00	FB11 .A37	100.0	100000.0
32	Q194A	8967.00	FB11 .A38	100.0	100000.0
33	Q194B	6584.00	FB11 .A39	100.0	100000.0
34	Q194C	6983.00	FB11 .A40	100.0	100000.0
35	Q195A	10493.00	FB11 .A41	100.0	100000.0
36	Q195B	8478.00	FB11 .A42	100.0	100000.0
37	Q195C	9268.00	FB11 .A43	100.0	100000.0
38	Q196	1337.00	FB11 .A44	100.0	100000.0
39	Q197	7212.00	FB11 .A45	100.0	100000.0
40	Q198	10404.00	FB11 .A46	100.0	100000.0
41	Q199	8404.00	FB11 .A47	100.0	100000.0
42	Q200	9078.00	FB11 .A48	100.0	100000.0
43	Q201	9615.00	FB11 .A49	100.0	100000.0
44	Q202A	5536.00	FB11 .A50	100.0	100000.0
45	Q202B	6276.00	FB11 .A51	100.0	100000.0
46	Q202C	10873.00	FB11 .A52	100.0	100000.0
47	Q203A	11501.00	FB11 .A53	100.0	100000.0
48	Q203B	11191.00	FB11 .A54	100.0	100000.0
49	Q203C	12103.00	FB11 .A55	100.0	100000.0

50	Q204A	8918.00	FBI1	.R56	100.0	100000.0
51	Q204B	9279.00	FBI1	.R57	100.0	100000.0
52	Q204C	11005.00	FBI1	.R58	100.0	100000.0
53	Q205A	9347.00	FBI1	.R59	100.0	100000.0
54	Q205B	8898.00	FBI1	.R60	100.0	100000.0
55	Q205C	9437.00	FBI1	.R61	100.0	100000.0
56	S626A	10957.00	FBI1	.R01	100.0	100000.0
57	S626B	10664.00	FBI1	.R02	100.0	100000.0
58	S626C	8908.00	FBI1	.R03	100.0	100000.0
59	S604A	8652.00	FBI1	.R04	100.0	100000.0
60	S604B	9725.00	FBI1	.R05	100.0	100000.0
61	S604C	9177.00	FBI1	.R06	100.0	100000.0

\*\*\*\*\* 18 DEC 1979 8:27:48 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: S626A  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 10957.00 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

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\*  
ACQUISITION DATE: 17DEC79 2339:36 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NR ITERATIONS: 10.  
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DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*  
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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.03	20863.	5767.	3.06	1022.47	1011.	23	3.477E 01	0.9	3.42E 00
2	5	559.70	2190.	1257.	1.72	1119.72	1109	37	3.650E 00	3.1	4.79E-01
3	5	564.14	182693.	1572.	2.34	1128.60	1109	37	3.045E 02	0.2	
4	1	602.79	5332.	1570.	2.42	1205.86	1194	23	8.886E 00	1.7	2.49E 00
5	1	645.85	311.	542.	2.15	1291.90	1287	11	5.182E-01	12.0	9.50E-01
6	1	657.47	196.	907.	4.34	1315.14	1306	19	3.264E-01	22.9	4.49E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	20863.	7.8000E-02	0.0000E-01	8.4819E-02	7.3177E-04
%-ANTIMONY	565.0	182693.	7.2000E-01	0.0000E-01	4.4527E-02	1.0507E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
\*\*\*\*\* 18 DEC 1979 8:28:59 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00

SAMPLE IDENTIFICATION: S626B

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 10664.00

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 17DEC79 2350:14 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*  
\*\*\*\*\*

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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932203 KEV \* ABUNDANCE LIMIT: 85.00%  
\*  
\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.04	19748.	5549.	3.14	1022.49	1012	23	3.291E-01	0.9	1.25E-00
2	7	559.63	2065.	972.	1.37	1119.60	1109	30	3.442E-00	3.1	8.11E-01
3	7	564.14	177048.	1441.	2.35	1128.60	1109	30	2.951E-02	0.2	
4	1	602.79	5146.	1169.	2.42	1205.84	1195	19	8.576E-00	1.7	2.92E-00
5	1	645.88	380.	799.	2.99	1291.97	1287	17	6.334E-01	11.7	2.94E-00
6	1	656.95	118.	903.	2.13	1314.10	1305	19	1.974E-01	37.0	1.99E-00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
X-COPPER	511.0	19748.	7.0000E-02	0.0000E-01	8.3294E-02	7.4077E-04
X-ANTIMONY	565.0	177048.	7.2000E-01	0.0000E-01	4.4420E-02	1.0642E-04
X-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
\*\*\*\*\* 18 DEC 1979 8:30:08 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: 5626C  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 8908.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 18DEC79 0:53 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.04	17398.	4364.	3.12	1022.49	1011	23	2.900E 01	0.9	2.50E 00
2	10	559.67	1913.	840.	1.35	1119.68	1108	38	3.189E 00	3.1	6.14E 01
3	10	564.15	147418.	1231.	2.35	1128.63	1108	38	2.457E 02	0.3	
4	1	602.81	4320.	905.	2.35	1205.89	1195	20	7.200E 00	1.8	9.75E-01
5	1	646.15	280.	623.	2.64	1292.50	1284	15	4.673E-01	13.9	2.36E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	17398.	7.0000E-02	0.0000E-01	8.8701E-02	8.2407E-04
Z-ANTIMONY	565.0	147418.	7.2000E-01	0.0000E-01	4.4360E-02	1.1650E-04
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
\*\*\*\*\* 18 DEC 1979 8:31:12 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: S604A  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 8652.000  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 18DEC79 11:27 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 650. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*  
\*\*\*\*\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
\*  
\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	510.98	1267.	7193.	3.24	1022.37	1016	14	2.112E 00	9.9	1.55E 00
2	3	559.18	32267.	4398.	2.38	1118.70	1108	34	5.378E 01	0.6	8.42E 01
3	3	564.12	366148.	3838.	2.37	1128.57	1108	34	6.102E 02	0.2	
4	1	602.77	10544.	3145.	2.35	1205.01	1196	19	1.757E 01	1.2	9.10E-01
5	1	645.86	802.	1557.	2.87	1291.92	1286	13	1.337E 00	7.8	9.82E-01
6	1	657.11	3158.	1876.	2.39	1314.40	1307	16	5.264E 00	2.6	4.40E-01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ANTIMONY	565.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ARSENIC	657.4	3158.	1.0000E-01	0.0000E-01	8.7978E-03	2.3156E-04



\*\*\*\*\*  
\*\*\*\*\* 18 DEC 1979 8:32:15 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: S604B  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 9725.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 18DEC79 22:29 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 659. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*  
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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*  
\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	510.83	1975.	7767.	3.53	1022.08	1016	14	3.292E 00	6.7	7.13E-01
2	2	559.18	35355.	5090.	2.36	1118.70	1107	35	5.892E 01	0.6	7.51E 01
3	2	564.12	419937.	4550.	2.38	1128.56	1107	35	6.999E 02	0.2	
4	1	573.40	148.	4311.	4.83	1147.11	1141	12	2.461E-01	63.4	3.30E 00
5	1	602.77	12327.	3812.	2.37	1205.81	1198	17	2.055E 01	1.1	2.03E 00
6	1	645.86	794.	2408.	2.78	1291.93	1285	15	1.324E 00	9.4	3.90E-01
7	1	657.15	3570.	2328.	2.41	1314.49	1307	16	5.950E 00	2.5	1.30E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	565.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	3570.	1.0000E-01	0.0000E-01	8.8901E-03	2.2587E-04

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:33:19 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 5604C  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 91.77.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 33:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 655. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.767 TO 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.08	1480.	8740.	2.93	1022.56	1014	16	2.467E 00	9.3	1.30E 00
2	2	559.18	34044.	4833.	2.37	1118.70	1107	34	5.674E 01	0.6	9.30E 01
3	2	564.12	399413.	4313.	2.38	1128.58	1107	34	6.657E 02	0.2	
4	1	602.78	11587.	4253.	2.40	1205.83	1195	21	1.931E 01	1.2	3.42E 00
5	1	646.04	706.	2062.	2.26	1292.20	1285	14	1.176E 00	9.8	1.68E 00
6	1	657.13	3531.	1811.	2.37	1314.45	1307	15	5.885E 00	2.4	1.18E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ANTIMONY	565.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ARSENIC	657.4	3531.	1.0000E-01	0.0000E-01	9.3642E-03	2.2430E-04

# SUMMARY OF STANDARD CONSTANTS:

## 1. ELEMENT %-COPPER AT 511.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.8000E-02	8.4819E-02	7.3177E-04
S626B	7.8000E-02	8.3294E-02	7.4077E-04
S626C	7.8000E-02	8.8701E-02	8.2407E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	8.5388E-02	4.4013E-04

## 2. ELEMENT %-ANTIMONY AT 565.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.2000E-01	4.4527E-02	1.0507E-04
S626B	7.2000E-01	4.4420E-02	1.0642E-04
S626C	7.2000E-01	4.4360E-02	1.1650E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	4.4441E-02	6.2923E-05

## 3. ELEMENT %-ARSENIC AT 657.40 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604A	1.0000E-01	8.7978E-03	2.3156E-04
S604B	1.0000E-01	8.8901E-03	2.2587E-04
S604C	1.0000E-01	9.3642E-03	2.2430E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	9.0226E-03	1.3116E-04

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 \*\*\*\*\* 18 DEC 1979 8:34:49 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q180A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12282.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1352:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 633. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7764.	19553.	0.0380	0.0004	1.1
%-ANTIMONY	564.1	2022.	230448.	0.7316	0.0019	0.3
%-ARSENIC	657.0	1050.	341.	0.0056	0.0008	14.6

1009:	375.	366.	344.	365.	374.	384.	433.	556.	787.
1010:	1092.	1645.	2325.	2919.	3225.	3215.	2722.	2127.	1478.
1027:	929.	589.	446.	344.	366.	345.	319.	273.	311.
1117:	1024.	1195.	1315.	1209.	1024.	1013.	1360.	3137.	8914.
1126:	21298.	35669.	45198.	45169.	36517.	21706.	8821.	2369.	563.
1135:	256.	217.	255.	193.	188.	176.	148.	185.	167.
1301:	94.	76.	83.	78.	87.	80.	81.	88.	67.
1310:	87.	83.	128.	123.	142.	162.	126.	94.	76.
1319:	74.	77.	77.	62.	64.	77.	83.	79.	59.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	19553.	7764.	3.13	1022.36	1011	24	3.259E 01	1.0
2	3	559.31	5714.	2002.	2.59	1118.95	1111	31	9.523E 00	1.9
3	3	564.10	230448.	2022.	2.31	1128.52	1111	31	3.841E 02	0.2
4	1	602.74	6012.	2356.	2.35	1205.74	1194	25	1.002E 01	1.7
5	1	645.81	451.	1002.	2.57	1291.82	1286	12	7.510E-01	11.0
6	1	657.03	341.	1050.	2.12	1314.24	1308	13	5.678E-01	14.5

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 \*\*\*\*\* 18 DEC 1979 0:36:01 AM \*\*\*\*\*  
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91113065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00

SAMPLE IDENTIFICATION: Q180B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9076.000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1402:51 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 0.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5236.	14229.	0.0378	0.0005	1.2
%-ANTIMONY	564.1	1316.	169495.	0.7296	0.0021	0.3
%-ARSENIC	657.2	724.	434.	0.0098	0.0010	10.1

1009:	236.	259.	259.	279.	261.	279.	301.	397.	523.
1010:	854.	1108.	1641.	2123.	2315.	2316.	2052.	1631.	1050.
1027:	699.	440.	327.	266.	261.	204.	192.	209.	203.
1117:	720.	893.	968.	949.	784.	794.	986.	2299.	6282.
1126:	15216.	26204.	33136.	33497.	27261.	16151.	6532.	1767.	339.
1135:	163.	142.	113.	131.	108.	101.	110.	84.	88.
1301:	59.	48.	67.	43.	59.	47.	47.	58.	42.
1310:	57.	64.	73.	118.	116.	104.	117.	78.	57.
1319:	61.	60.	59.	43.	44.	55.	60.	47.	36.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	14229.	5236.	3.14	1022.44	1013	22	2.371E 01	1.1
2	3	559.40	4675.	2007.	2.76	1119.14	1108	36	7.791E 00	2.0
3	3	564.11	169495.	1316.	2.30	1128.55	1108	36	2.825E 02	0.2
4	1	590.98	147.	732.	3.56	1182.25	1180	12	2.458E-01	27.2
5	1	602.78	4494.	1211.	2.27	1205.84	1198	18	7.490E 00	1.9
6	1	645.89	260.	1318.	2.42	1291.90	1280	21	4.331E-01	20.7
7	1	657.17	434.	724.	2.69	1314.54	1307	16	7.232E-01	10.0

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:37:15 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q180C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10304.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1413:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 627. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 0.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6324.	15646.	0.0369	0.0004	1.2
%-ANTIMONY	564.1	1590.	193347.	0.7345	0.0020	0.3
%-ARSENIC	657.1	690.	321.	0.0004	0.0008	12.9

1009:	263.	299.	291.	268.	340.	333.	401.	429.	598.
1018:	826.	1325.	1875.	2291.	2490.	2506.	2190.	1771.	1199.
1027:	693.	510.	377.	307.	290.	233.	198.	226.	238.
1117:	870.	989.	1094.	971.	909.	878.	1110.	2541.	7252.
1126:	17483.	29793.	37666.	37934.	30798.	18587.	7618.	2055.	430.
1135:	212.	139.	156.	127.	120.	139.	126.	128.	118.
1301:	67.	46.	66.	59.	62.	48.	62.	66.	65.
1310:	55.	60.	84.	122.	120.	117.	92.	91.	68.
1319:	59.	54.	56.	54.	53.	58.	65.	52.	58.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1	1	511.00	15646.	6324.	3.21	1022.42	1011	24	2.608E 01	1.1
2	3	559.35	4836.	2225.	2.55	1119.04	1110	31	8.059E 00	2.0
3	3	564.11	193347.	1590.	2.32	1128.54	1110	31	3.222E 02	0.2
4	1	602.75	5090.	1494.	2.30	1205.76	1196	18	8.483E 00	1.8
5	1	645.00	336.	780.	2.51	1291.00	1287	12	5.608E-01	12.9
6	1	657.09	321.	690.	2.26	1314.36	1310	12	5.351E-01	12.8

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 \*\*\*\*\* 18 DEC 1979 8:38:25 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q181A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9393.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1424:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 637. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	8435.	26589.	0.0695	0.0007	0.9
%-ANTIMONY	564.1	2163.	262647.	1.0966	0.0027	0.2
%-ARSENIC	657.2	869.	318.	0.0070	0.0010	14.3

1009:	416.	386.	373.	432.	460.	477.	522.	725.	951.
1010:	1454.	2184.	3008.	3896.	4253.	4252.	3706.	2749.	1970.
1027:	1237.	815.	543.	433.	380.	399.	356.	352.	354.
1117:	824.	911.	1050.	985.	1004.	1105.	1604.	3648.	10219.
1120:	23837.	40603.	51384.	51616.	41421.	25068.	10319.	2802.	633.
1135:	315.	291.	264.	216.	217.	203.	222.	211.	188.
1301:	91.	98.	81.	91.	108.	86.	92.	84.	82.
1310:	73.	96.	110.	119.	135.	132.	128.	112.	82.
1319:	75.	83.	78.	79.	96.	77.	90.	72.	93.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	26589.	8435.	3.16	1022.37	1011	23	4.431E 01	0.8
2	10	559.66	4229.	1542.	1.29	1119.65	1107	34	7.049E 00	2.0
3	10	564.10	262647.	2163.	2.32	1128.53	1107	34	4.377E 02	0.2
4	1	602.75	6887.	2134.	2.28	1205.78	1197	17	1.148E 01	1.5
5	1	645.92	496.	1287.	2.54	1292.05	1286	13	8.261E-01	11.2
6	1	657.18	318.	869.	2.64	1314.55	1310	11	5.304E-01	14.2

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 \*\*\*\*\* 18 DEC 1979 8:39:33 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q181B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10752.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1434:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 632. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6930.	23606.	0.0544	0.0005	1.0
%-ANTIMONY	564.1	1842.	225313.	0.8234	0.0021	0.3
%-ARSENIC	657.1	816.	276.	0.0053	0.0008	15.9

1009:	346.	360.	338.	349.	350.	421.	466.	566.	781.
1018:	1276.	1879.	2653.	3445.	3782.	3783.	3309.	2517.	1686.
1027:	1111.	681.	479.	369.	310.	287.	275.	285.	288.
1117:	692.	791.	845.	817.	855.	942.	1351.	2902.	8531.
1126:	20118.	34531.	43612.	44385.	35868.	21992.	9000.	2402.	582.
1135:	239.	229.	187.	173.	172.	137.	171.	154.	122.
1301:	74.	65.	67.	75.	74.	53.	67.	78.	58.
1310:	79.	79.	92.	111.	85.	125.	111.	82.	75.
1319:	55.	65.	71.	67.	68.	62.	71.	54.	62.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	23606.	6930.	3.14	1022.40	1011	22	3.934E 01	0.8
2	6	559.66	2887.	1374.	1.51	1119.65	1109	30	4.812E 00	2.6
3	6	564.12	225313.	1842.	2.32	1128.56	1109	30	3.755E 02	0.2
4	1	602.74	6040.	1441.	2.32	1205.74	1197	17	1.007E 01	1.6
5	1	646.06	465.	1233.	3.06	1292.33	1285	18	7.750E-01	11.6
6	1	657.10	276.	816.	2.42	1314.39	1309	12	4.592E-01	15.9



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 \*\*\*\*\* 18 DEC 1979 8:40:45 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q181C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9047.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1445:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6793.	20556.	0.0569	0.0006	1.0
%-ANTIMONY	564.1	1744.	196526.	0.8551	0.0023	0.3
%-ARSENIC	657.0	660.	217.	0.0050	0.0009	18.2

1009:	280.	286.	292.	337.	314.	320.	391.	484.	698.
1018:	1095.	1667.	2313.	2870.	3262.	3352.	2808.	2166.	1503.
1027:	926.	580.	407.	335.	268.	269.	248.	238.	244.
1117:	653.	737.	787.	803.	737.	784.	1135.	2581.	7479.
1126:	17659.	29936.	38057.	38472.	31225.	19271.	8004.	2219.	454.
1135:	208.	177.	135.	131.	132.	127.	101.	130.	129.
1301:	56.	63.	77.	51.	67.	56.	42.	61.	35.
1310:	45.	54.	79.	100.	93.	90.	83.	77.	62.
1319:	56.	61.	57.	47.	53.	55.	58.	68.	54.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	20556.	6793.	3.17	1022.41	1011	26	3.426E 01	0.9
2	4	559.48	3234.	2331.	2.53	1119.29	1111	34	5.390E 00	2.7
3	4	564.12	196526.	1744.	2.33	1128.56	1111	34	3.275E 02	0.2
4	1	602.78	5011.	1335.	2.31	1205.83	1198	17	8.352E 00	1.7
5	1	645.87	506.	1144.	2.99	1291.94	1286	22	8.432E-01	10.4
6	1	656.99	217.	660.	2.34	1314.17	1308	12	3.609E-01	18.1

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 \*\*\*\*\* 18 DEC 1979 8:42:00 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q182  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 4693.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1456:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3731.	10763.	0.0580	0.0008	1.4
%-ANTIMONY	564.1	715.	100527.	0.8448	0.0029	0.3
%-ARSENIC	657.7	650.	146.	0.0065	0.0017	26.1

1009:	159.	155.	155.	161.	154.	178.	219.	274.	377.
1018:	564.	865.	1149.	1588.	1722.	1690.	1489.	1163.	779.
1027:	477.	294.	208.	176.	123.	137.	128.	131.	97.
1117:	328.	379.	415.	394.	374.	424.	563.	1338.	3728.
1126:	8811.	15277.	19264.	19940.	16202.	9926.	3989.	1063.	176.
1135:	76.	56.	58.	50.	42.	58.	47.	47.	52.
1301:	30.	34.	15.	27.	14.	28.	32.	29.	34.
1310:	29.	27.	29.	45.	42.	57.	38.	35.	46.
1319:	26.	25.	21.	32.	21.	25.	24.	29.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	10763.	3731.	3.15	1022.42	1011	28	1.794E 01	1.3
2	6	559.51	1958.	1149.	2.87	1119.36	1107	34	3.264E 00	3.3
3	6	564.13	100527.	715.	2.32	1128.59	1107	34	1.675E 02	0.3
4	1	602.79	2733.	876.	2.34	1205.86	1195	31	4.556E 00	2.5
5	1	645.72	200.	428.	2.63	1291.65	1285	16	3.337E-01	16.2
6	1	657.71	146.	650.	2.62	1315.60	1302	23	2.433E-01	26.0

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:43:11 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q184A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7978.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1506:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	6069.	15337.	0.0491	0.0006	1.2
Z-ANTIMONY	564.1	1227.	159876.	0.7518	0.0023	0.3
Z-ARSENIC	657.1	599.	197.	0.0052	0.0010	19.0

1009:	244.	254.	233.	258.	278.	279.	336.	384.	554.
1018:	852.	1215.	1727.	2163.	2505.	2443.	2137.	1705.	1140.
1027:	703.	466.	335.	248.	247.	178.	200.	193.	195.
1117:	556.	674.	666.	658.	664.	663.	950.	2089.	5917.
1126:	14306.	24339.	31275.	31277.	25647.	15527.	6475.	1651.	351.
1135:	156.	111.	123.	84.	102.	97.	94.	100.	97.
1301:	39.	42.	48.	43.	36.	46.	40.	45.	41.
1310:	41.	55.	66.	67.	80.	84.	74.	52.	49.
1319:	52.	42.	43.	50.	42.	40.	39.	38.	46.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	15337.	6069.	3.18	1022.45	1011	20	2.556E 01	1.1
2	4	559.49	3390.	2104.	3.03	1119.31	1109	32	5.650E 00	2.6
3	4	564.12	159876.	1227.	2.32	1128.56	1109	32	2.665E 02	0.3
4	1	602.76	4088.	1095.	2.32	1205.79	1195	20	6.813E 00	1.9
5	1	645.88	260.	634.	2.33	1291.97	1286	13	4.340E-01	15.0
6	1	657.07	197.	599.	2.28	1314.32	1307	14	3.280E-01	19.0

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:44:23 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q184B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8278.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1517:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5652.	16006.	0.0498	0.0006	1.2
%-ANTIMONY	564.1	1687.	169936.	0.8127	0.0023	0.3
%-ARSENIC	657.2	655.	206.	0.0053	0.0010	18.9

1009:	228.	247.	283.	275.	301.	268.	336.	385.	572.
1018:	864.	1306.	1855.	2336.	2602.	2537.	2200.	1810.	1177.
1027:	747.	488.	339.	280.	241.	234.	197.	206.	219.
1117:	633.	683.	701.	688.	697.	730.	965.	2261.	6394.
1126:	15166.	26082.	33404.	33749.	26997.	16533.	6906.	1871.	412.
1135:	160.	113.	128.	114.	106.	112.	92.	102.	103.
1301:	43.	52.	40.	48.	57.	50.	43.	54.	38.
1310:	61.	42.	53.	84.	79.	72.	67.	75.	56.
1319:	45.	51.	46.	44.	40.	63.	51.	42.	47.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	16006.	5652.	3.19	1022.41	1012	23	2.668E 01	1.0
2	5	559.44	3068.	2440.	2.67	1119.21	1111	55	5.113E 00	2.9
3	5	564.11	169936.	1687.	2.31	1128.55	1111	55	2.832E 02	0.2
4	1	602.76	4488.	1008.	2.37	1205.00	1196	18	7.479E 00	1.8
5	1	645.85	302.	871.	2.39	1291.90	1205	17	5.031E-01	15.0
6	1	657.20	206.	655.	2.69	1314.58	1308	14	3.436E-01	18.9

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:45:31 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q184C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10298.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1528:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	9323.	19021.	0.0481	0.0005	1.1
%-ANTIMONY	564.1	1597.	210128.	0.8093	0.0021	0.3
%-ARSENIC	657.0	686.	309.	0.0064	0.0009	13.4

1009:	297.	308.	309.	289.	352.	370.	396.	497.	717.
1018:	1025.	1547.	2115.	2876.	3048.	3108.	2610.	2060.	1500.
1027:	930.	594.	421.	344.	291.	269.	264.	245.	238.
1117:	709.	844.	853.	878.	781.	862.	1175.	2647.	7935.
1126:	19152.	32428.	41073.	40995.	32720.	20261.	8647.	2320.	519.
1135:	231.	206.	159.	158.	133.	123.	152.	140.	144.
1301:	73.	63.	65.	47.	48.	57.	53.	48.	61.
1310:	56.	74.	81.	107.	101.	109.	85.	81.	60.
1319:	51.	54.	56.	53.	68.	57.	57.	35.	51.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	19021.	9323.	3.15	1022.42	1011.	33	3.170E 01	1.0
2	4	559.34	3848.	2173.	2.44	1119.02	1108	31	6.414E 00	2.4
3	4	564.10	210128.	1597.	2.33	1128.53	1108	31	3.502E 02	0.2
4	1	602.76	5471.	1360.	2.30	1205.79	1198	17	9.119E 00	1.7
5	1	645.89	387.	747.	2.10	1291.98	1286	12	6.442E-01	11.2
6	1	656.95	309.	686.	2.62	1314.10	1308	13	5.146E-01	13.3

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:46:42 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0185  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 3972.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1544:50 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 632. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	3717.	946.	0.0063	0.0006	9.7
%-ANTIMONY	564.1	1988.	255717.	2.5610	0.0063	0.2
%-ARSENIC	657.1	1681.	778.	0.0419	0.0035	8.4

1009:	338.	363.	306.	279.	311.	350.	324.	324.	312.
1018:	341.	345.	386.	440.	435.	458.	445.	424.	366.
1027:	346.	292.	311.	295.	331.	323.	289.	306.	281.
1117:	1597.	1903.	1928.	1779.	1454.	1305.	1512.	3475.	9765.
1126:	22860.	40153.	49898.	49614.	40191.	24464.	10391.	2945.	663.
1135:	327.	236.	211.	188.	206.	179.	201.	164.	172.
1301:	73.	69.	63.	76.	59.	61.	50.	76.	58.
1310:	75.	84.	132.	205.	200.	197.	170.	150.	97.
1319:	65.	70.	61.	37.	57.	53.	68.	69.	82.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.27	946.	3717.	2.95	1022.95	1017	12	1.576E 00	9.7
2	3	559.24	9386.	2636.	2.48	1118.82	1107	33	1.564E 01	1.3
3	3	564.10	255717.	1988.	2.33	1128.52	1107	33	4.262E 02	0.2
4	1	602.74	6759.	1880.	2.29	1205.75	1197	20	1.127E 01	1.5
5	1	645.84	609.	941.	3.05	1291.88	1286	15	1.015E 00	8.2
6	1	657.09	778.	1681.	2.56	1314.37	1304	25	1.296E 00	8.3

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:47:53 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q186A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11166.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1555:35 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7716.	24030.	0.0574	0.0006	1.0
%-ANTIMONY	564.1	1837.	239381.	0.8544	0.0021	0.2
%-ARSENIC	657.3	875.	256.	0.0049	0.0009	17.6

1009:	333.	338.	356.	378.	388.	394.	479.	611.	790.
1018:	1272.	1868.	2771.	3506.	3855.	3851.	3354.	2566.	1753.
1027:	1110.	700.	506.	398.	326.	300.	309.	297.	295.
1117:	685.	843.	897.	895.	884.	911.	1351.	3246.	8949.
1126:	21796.	37162.	46684.	46561.	37366.	23048.	9777.	2736.	584.
1135:	276.	217.	199.	171.	155.	165.	172.	144.	143.
1301:	86.	72.	62.	61.	48.	64.	61.	68.	59.
1310:	71.	79.	76.	94.	109.	108.	76.	95.	70.
1319:	71.	57.	64.	66.	57.	64.	70.	62.	49.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	24030.	7716.	3.13	1022.40	1011	24	4.005E 01	0.8
2	4	559.37	3971.	2430.	2.54	1119.07	1107	37	6.618E 00	2.4
3	4	564.10	239381.	1837.	2.33	1128.53	1107	37	3.990E 02	0.2
4	1	602.80	6401.	1648.	2.40	1205.86	1196	19	1.067E 01	1.5
5	1	645.90	346.	1020.	2.02	1292.00	1286	13	5.767E-01	14.1
6	1	657.25	256.	875.	2.68	1314.69	1309	14	4.268E-01	17.5



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 \*\*\*\*\* 18 DEC 1979 8:49:09 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q186B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9268.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1606:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NER ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7047.	19203.	0.0558	0.0006	1.1
%-ANTIMONY	564.1	1451.	190483.	0.8207	0.0022	0.3
%-ARSENIC	657.1	556.	224.	0.0052	0.0009	16.3

1009:	277.	300.	286.	306.	302.	347.	353.	451.	697.
1010:	293.	1555.	2116.	2824.	3100.	3140.	2654.	2088.	1432.
1027:	877.	558.	376.	326.	248.	232.	218.	255.	225.
1117:	569.	642.	670.	700.	741.	778.	1125.	2453.	6894.
1126:	17093.	29453.	37212.	36995.	29903.	18566.	7922.	2164.	538.
1135:	179.	150.	142.	117.	112.	115.	129.	110.	116.
1301:	57.	66.	46.	50.	55.	55.	44.	33.	44.
1310:	44.	39.	70.	58.	76.	85.	69.	66.	49.
1319:	48.	54.	42.	52.	51.	44.	34.	57.	47.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	19203.	7047.	3.12	1022.43	1011	27	3.200E 01	1.0
2	10	559.68	3015.	1100.	1.31	1119.69	1109	32	5.025E 00	2.4
3	10	564.11	190483.	1451.	2.33	1128.54	1109	32	3.175E 02	0.2
4	1	602.77	5064.	1570.	2.31	1205.80	1195	23	8.441E 00	1.8
5	1	645.81	296.	726.	2.10	1291.83	1286	12	4.931E-01	14.1
6	1	657.13	224.	556.	2.78	1314.45	1309	13	3.742E-01	16.3



\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:50:22 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q186C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8736.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1617:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	7208.	18310.	0.0570	0.0006	1.1
Z-ANTIMONY	564.1	1434.	176848.	0.0099	0.0023	0.3
Z-ARSENIC	657.3	649.	177.	0.0044	0.0010	21.7

1009:	253.	225.	280.	267.	290.	294.	358.	458.	639.
1018:	926.	1474.	2060.	2576.	2872.	3014.	2438.	1909.	1431.
1027:	826.	574.	376.	269.	260.	246.	253.	212.	232.
1117:	562.	625.	652.	677.	700.	685.	1052.	2242.	6473.
1126:	15590.	27225.	34831.	35054.	27967.	17163.	7300.	2082.	446.
1135:	171.	123.	154.	113.	117.	115.	117.	112.	99.
1301:	50.	52.	35.	54.	45.	51.	46.	37.	43.
1310:	43.	53.	47.	61.	72.	71.	80.	55.	50.
1319:	37.	48.	34.	47.	46.	47.	28.	58.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	18310.	7208.	3.10	1022.43	1011	31	3.052E 01	1.0
2	10	559.70	2878.	1103.	1.31	1119.73	1111	30	4.797E 00	2.5
3	10	564.11	176848.	1434.	2.30	1128.55	1111	30	2.947E 02	0.2
4	1	602.76	4822.	1216.	2.32	1205.79	1195	19	8.037E 00	1.8
5	1	645.91	319.	697.	2.51	1292.03	1287	14	5.313E-01	13.0
6	1	657.29	177.	649.	2.48	1314.77	1309	15	2.952E-01	21.7

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:51:30 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q187A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12924.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1627:39 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6975.	14870.	0.0316	0.0004	1.3
%-ANTIMONY	564.1	1744.	223322.	0.6926	0.0018	0.3
%-ARSENIC	657.1	840.	604.	0.0102	0.0008	8.0

1009:	364.	333.	327.	335.	316.	372.	409.	488.	632.
1018:	878.	1270.	1789.	2290.	2471.	2487.	2229.	1733.	1151.
1027:	747.	526.	386.	350.	335.	287.	289.	270.	281.
1117:	1146.	1415.	1460.	1329.	1087.	1070.	1321.	3062.	8587.
1120:	20180.	34692.	43760.	43085.	35081.	21449.	9091.	2538.	566.
1135:	229.	222.	182.	161.	174.	164.	152.	161.	141.
1301:	84.	69.	71.	74.	64.	63.	64.	47.	69.
1310:	74.	83.	125.	128.	173.	167.	141.	109.	68.
1319:	81.	64.	70.	57.	56.	67.	71.	54.	50.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	14870.	6975.	3.12	1022.43	1012	23	2.478E 01	1.1
2	3	559.27	6825.	2310.	2.51	1118.87	1108	32	1.137E 01	1.6
3	3	564.10	223322.	1744.	2.33	1128.53	1108	32	3.722E 02	0.2
4	1	602.76	5940.	1475.	2.27	1205.79	1198	17	9.901E 00	1.6
5	1	645.99	423.	942.	2.50	1292.19	1286	14	7.048E-01	11.4
6	1	657.09	604.	840.	2.50	1314.37	1308	15	1.006E 00	7.9

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:52:38 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q187B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9631.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1638:25 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4851.	11112.	0.0320	0.0004	1.4
%-ANTIMONY	564.1	1381.	164240.	0.6848	0.0020	0.3
%-ARSENIC	657.1	619.	415.	0.0094	0.0009	9.9

1009:	237.	264.	267.	232.	260.	267.	307.	349.	456.
1018:	623.	977.	1328.	1584.	1873.	1907.	1627.	1286.	878.
1027:	570.	374.	312.	260.	235.	197.	199.	184.	184.
1117:	868.	1049.	1055.	973.	852.	753.	996.	2116.	6092.
1126:	14647.	25549.	32000.	32046.	25762.	15983.	6821.	1883.	417.
1135:	165.	131.	125.	116.	105.	96.	101.	98.	92.
1301:	49.	54.	52.	41.	45.	39.	38.	51.	47.
1310:	49.	57.	63.	116.	127.	121.	98.	78.	62.
1319:	43.	33.	50.	38.	54.	50.	54.	46.	39.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PN	CTS/SEC	%ERR
1	1	511.03	11112.	4851.	3.13	1022.47	1012	22	1.852E 01	1.3
2	3	559.30	4919.	1999.	2.59	1118.93	1110	32	8.198E 00	1.9
3	3	564.11	164240.	1381.	2.33	1128.54	1110	32	2.737E 02	0.2
4	1	602.79	4580.	1195.	2.34	1205.86	1194	20	7.634E 00	1.8
5	1	646.06	322.	595.	3.00	1292.32	1286	13	5.372E-01	12.1
6	1	657.09	415.	619.	2.25	1314.36	1307	15	6.919E-01	9.8

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:53:46 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q187C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10080.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1649:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4872.	10948.	0.0304	0.0004	1.4
%-ANTIMONY	564.1	1410.	170968.	0.6824	0.0019	0.3
%-ARSENIC	656.9	896.	348.	0.0076	0.0010	13.4

1009:	225.	231.	255.	238.	215.	266.	304.	378.	446.
1018:	644.	977.	1371.	1729.	1911.	1872.	1633.	1229.	823.
1027:	606.	378.	299.	248.	221.	213.	222.	203.	228.
1117:	968.	1005.	1098.	971.	831.	792.	1013.	2171.	6384.
1126:	15412.	26040.	33547.	33590.	26728.	16664.	7297.	1898.	399.
1135:	167.	136.	126.	121.	113.	101.	91.	110.	92.
1301:	51.	48.	40.	44.	42.	43.	53.	43.	51.
1310:	50.	67.	92.	106.	117.	98.	99.	67.	61.
1319:	56.	34.	28.	36.	46.	47.	45.	58.	49.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.96	10948.	4872.	3.03	1022.33	1012	21	1.825E 01	1.3
2	3	559.26	5154.	2141.	2.65	1118.85	1110	38	8.591E 00	1.9
3	3	564.11	170968.	1410.	2.32	1128.55	1110	38	2.849E 02	0.2
4	1	602.77	4686.	1089.	2.41	1205.82	1196	18	7.810E 00	1.8
5	1	645.98	443.	793.	3.14	1292.17	1286	19	7.388E-01	10.2
6	1	656.92	348.	896.	2.54	1314.02	1308	18	5.794E-01	13.3

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:54:57 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0188  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8304.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1659:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NDR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6533.	10822.	0.0369	0.0006	1.5
%-ANTIMONY	564.1	1369.	180474.	0.8761	0.0024	0.3
%-ARSENIC	657.0	926.	375.	0.0100	0.0013	12.7

1009:	251.	242.	268.	268.	282.	266.	317.	341.	494.
1018:	692.	1018.	1312.	1615.	1854.	1870.	1593.	1279.	877.
1027:	580.	427.	335.	266.	234.	213.	221.	201.	223.
1117:	889.	1087.	1112.	984.	882.	780.	1086.	2399.	6648.
1126:	16345.	27804.	35252.	35116.	28182.	17567.	7490.	2078.	452.
1135:	158.	104.	121.	136.	123.	94.	101.	102.	107.
1301:	47.	53.	43.	57.	39.	48.	54.	35.	53.
1310:	46.	57.	91.	118.	116.	131.	98.	70.	63.
1319:	59.	48.	31.	39.	39.	40.	53.	40.	47.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	10822.	6533.	3.17	1022.41	1012	26	1.804E 01	1.4
2	3	559.25	5372.	2094.	2.71	1118.83	1107	31	8.954E 00	1.8
3	3	564.11	180474.	1369.	2.33	1128.54	1107	31	3.008E 02	0.2
4	1	602.75	4723.	1161.	2.33	1205.76	1196	18	7.872E 00	1.8
5	1	645.93	361.	905.	2.40	1292.06	1285	18	6.024E-01	12.9
6	1	657.04	375.	926.	2.19	1314.27	1307	19	6.245E-01	12.6

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:56:05 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q189A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10081.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1710:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5721.	15838.	0.0449	0.0005	1.2
%-ANTIMONY	564.1	1608.	189592.	0.7595	0.0021	0.3
%-ARSENIC	657.1	693.	243.	0.0054	0.0009	16.7

1009:	279.	260.	264.	272.	266.	329.	379.	428.	526.
1010:	908.	1349.	1822.	2303.	2595.	2559.	2201.	1698.	1186.
1027:	751.	510.	364.	301.	260.	232.	233.	238.	231.
1117:	715.	822.	896.	847.	768.	817.	1133.	2548.	7211.
1126:	17205.	29373.	36685.	36712.	29953.	18117.	7800.	2213.	496.
1135:	192.	141.	138.	137.	120.	128.	122.	122.	121.

1301:	52.	52.	47.	53.	57.	42.	42.	55.	38.
1310:	60.	54.	71.	91.	96.	91.	76.	71.	66.
1319:	32.	36.	43.	51.	54.	56.	41.	50.	47.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	15838.	5721.	3.17	1022.36	1011.	23	2.640E 01	1.0
2	3	559.40	4062.	2186.	2.63	1119.13	1107	35	6.770E 00	2.3
3	3	564.10	189592.	1608.	2.34	1128.53	1107	35	3.160E 02	0.2
4	1	602.76	5096.	1124.	2.33	1205.78	1198	16	8.493E 00	1.7
5	1	645.85	406.	799.	2.21	1291.90	1284	15	6.771E-01	11.0
6	1	657.06	243.	693.	2.48	1314.31	1309	14	4.053E-01	16.6

\*\*\*\*\* 18 DEC 1979 8:57:15 AM \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00

SAMPLE IDENTIFICATION: 0189B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 11256.00

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1720:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7145.	18067.	0.0463	0.0005	1.1
%-ANTIMONY	564.1	1940.	228052.	0.8198	0.0021	0.3
%-ARSENIC	657.3	868.	355.	0.0070	0.0009	13.0

1009:	330.	346.	354.	387.	347.	383.	407.	501.	709.
1018:	1030.	1580.	2147.	2732.	3120.	3021.	2526.	1954.	1416.
1027:	951.	597.	435.	384.	302.	264.	281.	274.	291.
1117:	870.	1007.	1067.	982.	991.	978.	1331.	3043.	8613.
1126:	20801.	35239.	44085.	43995.	35652.	22089.	9394.	2717.	632.
1135:	258.	215.	167.	172.	155.	149.	166.	156.	141.
1301:	71.	70.	61.	70.	50.	64.	67.	59.	63.
1310:	60.	81.	95.	105.	119.	112.	107.	110.	80.
1319:	61.	62.	63.	59.	56.	58.	62.	55.	64.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.97	18067.	7145.	3.09	1022.35	1013	22	3.011E 01	1.0
2	3	559.35	4730.	2317.	2.39	1119.03	1107	34	7.884E 00	2.0
3	3	564.10	228052.	1940.	2.35	1128.53	1107	34	3.801E 02	0.2
4	1	602.75	6075.	1635.	2.29	1205.77	1196	20	1.012E 01	1.6
5	1	645.94	308.	1133.	1.78	1292.08	1287	15	5.132E-01	16.5
6	1	657.29	355.	868.	2.95	1314.76	1308	14	5.910E-01	12.9



\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 8:58:25 AM \*\*\*\*\*  
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91119065 RF LEAD- SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q189C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8261.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1731:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5175.	13568.	0.0478	0.0006	1.3
%-ANTIMONY	564.1	1299.	168301.	0.6259	0.0023	0.3
%-ARSENIC	657.0	494.	301.	0.0082	0.0010	12.0

1009:	230.	260.	231.	228.	268.	277.	298.	349.	479.
1010:	729.	1143.	1567.	1973.	2132.	2151.	1929.	1488.	1054.
1027:	683.	418.	327.	275.	214.	201.	209.	200.	178.
1117:	659.	710.	746.	748.	672.	758.	900.	2202.	6221.
1126:	15124.	25875.	32251.	32484.	26708.	16378.	7052.	2007.	391.
1135:	150.	111.	107.	110.	98.	92.	81.	89.	80.
1301:	46.	55.	50.	59.	43.	45.	44.	32.	50.
1310:	53.	53.	66.	80.	90.	89.	70.	66.	53.
1319:	41.	36.	40.	47.	38.	25.	36.	44.	50.

PULSE- FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	13568.	5175.	3.25	1022.43	1011	23	2.261E 01	1.1
2	5	559.29	3433.	1456.	2.10	1118.92	1108	36	5.722E 00	2.3
3	5	564.11	168301.	1299.	2.35	1128.55	1108	36	2.805E 02	0.2
4	1	602.75	4615.	1070.	2.37	1205.78	1197	20	7.691E 00	1.8
5	1	645.08	207.	1392.	2.09	1291.55	1280	24	3.448E-01	26.4
6	1	657.05	301.	494.	2.85	1314.28	1308	13	5.017E-01	11.9



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 \*\*\*\*\* 18 DEC 1979 8:58:40 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q190A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10315.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1742:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7248.	19141.	0.0546	0.0006	1.1
%-ANTIMONY	564.1	1900.	217000.	0.0544	0.0022	0.3
%-ARSENIC	657.4	873.	0. <	0.0031	NOT DETECTABLE	

1009:	308.	304.	342.	317.	334.	346.	417.	502.	745.
1018:	1115.	1557.	2180.	2700.	3196.	3178.	2729.	2144.	1501.
1027:	956.	596.	481.	348.	298.	285.	239.	242.	278.
1117:	629.	766.	774.	801.	831.	899.	1195.	2960.	8277.
1126:	19718.	33510.	41982.	41849.	34031.	20961.	9112.	2576.	582.
1135:	226.	213.	191.	163.	152.	145.	149.	125.	123.
1301:	64.	68.	55.	54.	61.	72.	50.	43.	49.
1310:	75.	63.	68.	72.	82.	83.	83.	66.	56.
1319:	63.	55.	58.	59.	59.	45.	51.	60.	51.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	19141.	7248.	3.12	1022.49	1012	24	3.190E 01	1.0
2	6	559.34	3448.	1836.	1.98	1119.02	1109	37	5.746E 00	2.4
3	6	564.10	217000.	1900.	2.35	1128.54	1109	37	3.617E 02	0.2
4	1	602.78	6055.	1419.	2.37	1205.82	1194	22	1.009E 01	1.6
5	1	645.84	384.	2162.	2.17	1291.89	1284	31	6.408E-01	17.8
6	1	670.54	190.	525.	3.63	1341.25	1335	10	3.159E-01	18.6

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:00:49 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q1908  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9384.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1752:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 627. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 0.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	5969.	17229.	0.0545	0.0006	1.1
Z-ANTIMONY	564.1	1541.	200658.	0.8701	0.0023	0.3
Z-ARSENIC	657.1	484.	193.	0.0046	0.0008	17.7

1009:	303.	286.	280.	306.	281.	364.	390.	469.	649.
1018:	962.	1361.	2015.	2407.	2658.	2795.	2478.	1873.	1272.
1027:	864.	535.	368.	316.	253.	229.	243.	229.	249.
1117:	577.	670.	733.	711.	683.	810.	1187.	2669.	7593.
1120:18043.	30661.	38756.	38846.	31659.	19444.	8682.	2418.	505.	
1135:	219.	140.	119.	128.	102.	111.	132.	105.	102.
1301:	60.	44.	51.	59.	38.	48.	55.	44.	48.
1310:	46.	56.	56.	64.	95.	73.	69.	47.	51.
1319:	39.	45.	54.	42.	45.	46.	51.	40.	53.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	17229.	5969.	3.13	1022.43	1011	23	2.871E 01	1.0
2	5	559.46	3437.	2220.	2.88	1119.26	1109	30	5.729E 00	2.6
3	5	564.11	200658.	1541.	2.35	1128.55	1109	30	3.344E 02	0.2
4	1	602.77	5424.	1344.	2.33	1205.81	1195	19	9.040E 00	1.7
5	1	645.78	388.	728.	2.30	1291.76	1285	14	6.468E 01	11.1
6	1	657.07	193.	484.	2.13	1314.32	1309	11	3.215E 01	17.7

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:02:01 FIM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q190C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9476.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1803:33 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7968.	17173.	0.0543	0.0006	1.2
%-ANTIMONY	564.1	1611.	191045.	0.8219	0.0022	0.3
%-ARSENIC	657.4	728.	0. <	0.0031	NOT DETECTABLE	

1009:	271.	278.	248.	287.	304.	312.	358.	445.	568.
1018:	898.	1344.	1906.	2442.	2833.	2732.	2459.	1879.	1377.
1027:	819.	515.	362.	289.	262.	262.	224.	239.	209.
1117:	553.	656.	733.	692.	608.	754.	1100.	2544.	7148.
1126:16993.	29251.	36448.	37284.	30220.	18861.	8094.	2363.	491.	
1135:	191.	127.	117.	120.	111.	108.	112.	120.	106.
1301:	59.	46.	45.	40.	42.	33.	54.	50.	42.
1310:	47.	59.	59.	75.	69.	74.	71.	53.	55.
1319:	49.	40.	35.	37.	47.	44.	38.	41.	48.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	17173.	7968.	3.15	1022.50	1011	32	2.862E 01	1.1
2	1	527.56	137.	2463.	1.69	1055.51	1052	12	2.278E-01	52.1
3	3	559.46	2984.	1989.	2.58	1119.25	1109	33	4.973E 00	2.8
4	3	564.12	191045.	1611.	2.35	1128.57	1109	33	3.184E 02	0.2
5	1	602.79	5100.	1579.	2.29	1205.84	1198	22	8.501E 00	1.8
6	1	645.80	355.	718.	2.49	1291.80	1286	14	5.912E-01	11.9

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:03:10 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00

SAMPLE IDENTIFICATION: Q191A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9958.000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1814:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5395.	13363.	0.0406	0.0005	1.3
%-ANTIMONY	564.1	1574.	182184.	0.7473	0.0021	0.3
%-ARSENIC	657.0	693.	287.	0.0066	0.0009	14.3

1009:	251.	281.	258.	260.	272.	291.	341.	393.	486.
1018:	768.	1165.	1548.	1896.	2164.	2225.	1878.	1479.	1097.
1027:	684.	448.	306.	274.	237.	212.	230.	192.	238.
1117:	706.	879.	902.	849.	775.	784.	1071.	2316.	6836.
1126:	16154.	27888.	35140.	35295.	28327.	18287.	7751.	2198.	471.
1135:	172.	112.	119.	124.	109.	103.	93.	110.	92.
1301:	47.	44.	39.	37.	43.	49.	43.	44.	55.
1310:	47.	36.	65.	95.	95.	85.	72.	73.	52.
1319:	46.	46.	41.	40.	57.	36.	45.	41.	44.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	13363.	5395.	3.23	1022.46	1011	22	2.227E 01	1.2
2	3	559.34	4016.	1991.	2.50	1119.02	1110	36	6.694E 00	2.2
3	3	564.12	182184.	1574.	2.35	1128.56	1110	36	3.036E 02	0.2
4	1	602.75	4936.	1216.	2.34	1205.77	1195	19	8.226E 00	1.7
5	1	645.97	305.	750.	2.35	1292.14	1284	15	5.079E-01	13.9
6	1	657.03	287.	693.	2.51	1314.24	1304	17	4.776E-01	14.3

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:04:22 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q191B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9431.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1824:50 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6446.	12671.	0.0411	0.0006	1.4
%-ANTIMONY	564.1	1669.	183939.	0.7981	0.0022	0.3
%-ARSENIC	657.3	660.	310.	0.0075	0.0010	13.1

1009:	244.	245.	271.	263.	269.	277.	342.	389.	485.
1018:	729.	1099.	1517.	1830.	2174.	2093.	1800.	1429.	1016.
1027:	673.	424.	326.	276.	275.	237.	233.	193.	206.
1117:	793.	863.	888.	885.	789.	799.	1030.	2452.	6949.
1126:	16661.	27955.	35561.	35329.	28721.	18234.	7968.	2248.	420.
1135:	171.	152.	129.	119.	115.	103.	121.	111.	112.
1301:	34.	44.	54.	47.	53.	42.	46.	47.	49.
1310:	54.	55.	77.	70.	88.	113.	72.	49.	64.
1319:	49.	41.	39.	49.	42.	31.	50.	45.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1.	511.00	12671.	6446.	3.15	1022.41	1011	27	2.112E 01	1.3
2	10	559.27	4026.	1250.	1.36	1118.00	1111	27	6.709E 00	2.0
3	10	564.11	183939.	1669.	2.36	1128.55	1111	27	3.066E 02	0.2
4	1.	602.78	5006.	1240.	2.39	1205.83	1194	20	8.343E 00	1.7
5	1.	645.75	448.	676.	2.94	1291.71	1286	16	7.461E-01	9.5
6	1.	657.26	310.	660.	2.55	1314.71	1307	15	5.165E-01	13.0

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 \*\*\*\*\* 18 DEC 1979 9:05:32 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q191C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9965.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1835:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6049.	14284.	0.0442	0.0006	1.2
%-ANTIMONY	564.1	1981.	210484.	0.8660	0.0023	0.3
%-ARSENIC	657.2	1013.	331.	0.0077	0.0011	14.7

1009:	319.	283.	293.	317.	271.	312.	375.	424.	555.
1018:	819.	1224.	1613.	2157.	2439.	2423.	2009.	1604.	1164.
1027:	756.	458.	339.	313.	286.	272.	244.	232.	269.
1117:	798.	989.	1020.	957.	937.	853.	1271.	2820.	7841.
1126:	18760.	32024.	40222.	40874.	33194.	21067.	9018.	2585.	580.
1135:	207.	153.	168.	146.	139.	140.	123.	132.	136.
1301:	67.	57.	47.	52.	65.	59.	45.	61.	65.
1310:	55.	71.	86.	103.	121.	130.	97.	83.	73.
1319:	61.	52.	51.	39.	55.	46.	51.	61.	49.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	14284.	6049.	3.10	1022.44	1011	23	2.381E 01	1.1
2	3	559.39	4404.	2515.	2.55	1119.11	1111	32	7.339E 00	2.2
3	3	564.12	210484.	1981.	2.36	1128.57	1111	32	3.508E 02	0.2
4	1	602.77	5895.	1572.	2.41	1205.81	1197	19	9.825E 00	1.6
5	1	646.10	515.	916.	3.13	1292.40	1285	16	8.589E-01	9.4
6	1	657.21	331.	1013.	2.29	1314.60	1306	18	5.520E-01	14.7

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 \*\*\*\*\* 18 DEC 1979 9:06:44 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q192  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8390.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1846:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4730.	11062.	0.0411	0.0006	1.4
%-ANTIMONY	564.1	1375.	159663.	0.7817	0.0023	0.3
%-ARSENIC	657.1	725.	290.	0.0080	0.0012	14.5

1009:	199.	214.	241.	231.	241.	267.	301.	347.	387.
1018:	644.	955.	1290.	1625.	1929.	1852.	1543.	1253.	929.
1027:	591.	386.	303.	216.	206.	191.	195.	193.	189.
1117:	611.	742.	737.	710.	732.	702.	884.	2095.	5704.
1126:	14197.	24229.	30811.	30640.	25440.	15928.	6903.	1966.	436.
1135:	170.	113.	95.	109.	70.	86.	96.	85.	80.
1301:	41.	29.	46.	34.	31.	46.	40.	29.	42.
1310:	30.	51.	60.	86.	86.	84.	70.	67.	45.
1319:	39.	39.	49.	31.	31.	34.	32.	33.	40.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	11062.	4730.	3.13	1022.44	1012	22	1.844E 01	1.3
2	4	559.36	3262.	1573.	2.19	1119.06	1111	31	5.436E 00	2.5
3	4	564.12	159663.	1375.	2.35	1128.58	1111	31	2.661E 02	0.3
4	1	602.78	4390.	1024.	2.36	1205.82	1197	17	7.317E 00	1.8
5	1	645.97	288.	581.	2.48	1292.15	1285	14	4.804E-01	13.2
6	1	657.10	290.	725.	2.61	1314.39	1304	20	4.834E-01	14.4

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 \*\*\*\*\* 18 DEC 1979 9:07:54 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q193A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7935.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1856:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4137.	9029.	0.0358	0.0006	1.5
%-ANTIMONY	564.1	1108.	138561.	0.7186	0.0022	0.3
%-ARSENIC	657.2	719.	315.	0.0092	0.0012	13.4

1009:	181.	169.	195.	219.	226.	209.	229.	262.	340.
1018:	576.	839.	1081.	1342.	1548.	1526.	1360.	1026.	737.
1027:	473.	353.	233.	176.	205.	164.	149.	168.	185.
1117:	638.	786.	805.	690.	641.	620.	824.	1748.	5112.
1126:	12261.	21079.	26543.	26715.	22010.	13756.	6002.	1740.	342.
1135:	119.	84.	91.	81.	76.	82.	75.	62.	65.
1301:	27.	43.	39.	26.	32.	30.	23.	36.	29.
1310:	32.	38.	57.	61.	93.	95.	65.	63.	41.
1319:	31.	36.	33.	36.	24.	30.	38.	34.	31.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	9029.	4137.	3.15	1022.43	1014	21	1.505E 01	1.5
2	3	559.31	3705.	1460.	2.59	1118.95	1110	28	6.176E 00	2.2
3	3	564.12	138561.	1108.	2.36	1128.58	1110	28	2.309E 02	0.3
4	1	602.75	3716.	816.	2.30	1205.77	1197	17	6.193E 00	2.0
5	1	645.62	275.	508.	3.31	1291.44	1286	14	4.576E-01	13.1
6	1	657.22	315.	719.	2.31	1314.63	1307	25	5.242E-01	13.3



\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:09:04 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q193B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 4479.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1907:15 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 611. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2180.	4935.	0.0350	0.0007	2.0
%-ANTIMONY	564.1	496.	79107.	0.7282	0.0028	0.4
%-ARSENIC	657.3	250.	170.	0.0088	0.0014	15.3

1009:	104.	99.	128.	130.	106.	110.	117.	151.	215.
1018:	327.	398.	613.	797.	871.	911.	779.	538.	409.
1027:	266.	172.	151.	123.	98.	98.	102.	93.	97.
1117:	357.	417.	455.	395.	379.	342.	448.	1026.	2861.
1126:	6892.	11914.	15222.	15433.	12724.	7907.	3527.	961.	203.
1135:	50.	37.	46.	29.	39.	42.	34.	30.	33.
1301:	23.	12.	25.	23.	12.	20.	21.	25.	25.
1310:	19.	23.	31.	47.	45.	54.	48.	24.	28.
1319:	9.	17.	15.	18.	15.	20.	18.	23.	17.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	4935.	2180.	2.89	1022.45	1013	20	8.225E 00	2.0
2	3	559.31	2216.	841.	2.76	1118.96	1107	31	3.693E 00	2.8
3	3	564.13	79107.	496.	2.33	1128.60	1107	31	1.318E 02	0.4
4	1	602.80	2102.	456.	2.37	1205.87	1195	19	3.503E 00	2.6
5	1	645.75	260.	244.	3.91	1291.71	1284	15	4.329E-01	10.5
6	1	657.25	170.	250.	2.42	1314.69	1310	13	2.825E-01	15.3

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:10:17 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q193C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5517.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1917:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2840.	6292.	0.0366	0.0007	1.8
%-ANTIMONY	564.1	675.	96472.	0.7223	0.0026	0.4
%-ARSENIC	657.0	215.	304.	0.0129	0.0012	9.0

1009:	120.	138.	135.	153.	141.	164.	159.	214.	255.
1018:	345.	541.	811.	994.	1080.	1094.	878.	698.	513.
1027:	349.	232.	164.	151.	109.	114.	127.	120.	121.
1117:	401.	485.	538.	528.	433.	385.	536.	1147.	3472.
1126:	8414.	14547.	18737.	18899.	15201.	9720.	4185.	1210.	269.
1135:	70.	48.	48.	51.	45.	59.	33.	38.	41.
1301:	25.	31.	30.	26.	25.	34.	18.	14.	20.
1310:	22.	22.	31.	67.	57.	59.	50.	39.	35.
1319:	18.	21.	19.	13.	22.	24.	15.	18.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.95	6292.	2840.	3.08	1022.32	1013	21	1.049E 01	1.7
2	2	559.30	2464.	1012.	2.57	1118.94	1110	31	4.106E 00	2.7
3	2	564.13	96472.	675.	2.33	1128.59	1110	31	1.608E 02	0.3
4	1	602.77	2669.	504.	2.31	1205.82	1195	21	4.448E 00	2.3
5	1	645.76	243.	300.	2.76	1291.72	1285	15	4.057E-01	11.9
6	1	656.96	304.	215.	3.15	1314.11	1309	13	5.065E-01	8.9

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:11:30 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q194A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8967.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1928:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	5657.	10306.	0.0372	0.0006	1.5
%-ANTIMONY	564.1	1373.	171555.	0.7917	0.0022	0.3
%-ARSENIC	657.2	755.	333.	0.0088	0.0011	13.0

1009:	218.	226.	210.	259.	252.	275.	291.	361.	432.
1018:	618.	892.	1202.	1456.	1690.	1688.	1520.	1202.	865.
1027:	571.	364.	324.	229.	201.	219.	202.	217.	194.
1117:	772.	912.	916.	883.	825.	778.	1038.	2231.	6364.
1126:	15311.	25954.	33112.	33208.	27039.	17054.	7461.	2226.	433.
1135:	150.	135.	108.	110.	117.	82.	109.	99.	90.
1301:	46.	47.	34.	56.	48.	37.	31.	38.	43.
1310:	53.	24.	59.	89.	98.	112.	79.	65.	58.
1319:	34.	34.	41.	37.	32.	32.	37.	41.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	10306.	5657.	3.26	1022.51	1011	27	1.718E 01	1.4
2	3	559.37	4593.	1868.	2.67	1119.07	1107	35	7.655E 00	2.0
3	3	564.12	171555.	1373.	2.35	1128.57	1107	35	2.859E 02	0.2
4	1	602.80	4816.	1058.	2.37	1205.86	1197	18	8.027E 00	1.7
5	1	638.68	114.	543.	2.23	1277.58	1273	12	1.900E-01	30.4
6	1	645.93	374.	536.	2.95	1292.06	1285	14	6.228E-01	10.2
7	1	657.16	333.	755.	2.44	1314.50	1303	19	5.554E-01	12.9

\*\*\*\*\*  
\*\*\*\*\* 18 DEC 1979 9:12:44 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: 0194B  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 6584.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 17DEC79 1938:38 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

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UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR			
%-COPPER	511. 0	3738.	7688.	0. 0382	0. 0006	1. 7			
%-ANTIMONY	564. 1	930.	124903.	0. 7865	0. 0025	0. 3			
%-ARSENIC	657. 1	540.	257.	0. 0093	0. 0013	14. 3			
1009:	193.	146.	165.	174.	194.	207.	198.	245.	331.
1010:	456.	662.	868.	1144.	1290.	1318.	1088.	842.	661.
1027:	436.	262.	227.	180.	176.	152.	130.	151.	131.
1117:	552.	634.	671.	627.	557.	520.	679.	1539.	4438.
1126:10905.	18869.	23976.	24092.	19939.	12621.	5411.	1517.	321.	
1135:	81.	81.	74.	57.	70.	62.	74.	60.	49.
1301:	37.	25.	37.	33.	31.	26.	25.	24.	28.
1310:	22.	47.	53.	70.	72.	81.	63.	52.	35.
1319:	31.	28.	25.	25.	26.	26.	28.	30.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	7688.	3738.	3.15	1022.45	1011	25	1.281E 01	1.6
2	3	559.28	3032.	1194.	2.38	1118.90	1100	32	5.054E 00	2.4
3	3	564.13	124903.	930.	2.35	1128.59	1100	32	2.082E 02	0.3
4	1	602.80	3354.	779.	2.34	1205.87	1190	18	5.590E 00	2.1
5	1	645.14	316.	632.	4.43	1290.48	1283	19	5.275E-01	12.6
6	1	657.13	257.	540.	2.45	1314.44	1304	18	4.287E-01	14.2

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 \*\*\*\*\* 18 DEC 1979 9:13:53 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q194C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6983.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1949:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6141.	9887.	0.0467	0.0007	1.6
%-ANTIMONY	564.1	1426.	167117.	0.9941	0.0028	0.3
%-ARSENIC	657.1	534.	283.	0.0096	0.0013	13.1

1009:	238.	236.	222.	248.	258.	246.	260.	299.	414.
1018:	618.	855.	1182.	1506.	1620.	1572.	1418.	1200.	808.
1027:	488.	382.	269.	237.	233.	206.	182.	216.	192.
1117:	762.	883.	898.	868.	733.	719.	981.	2158.	6043.
1126:	14712.	25230.	32051.	32445.	26624.	16667.	7447.	2069.	441.
1135:	170.	114.	113.	112.	101.	94.	79.	82.	85.
1301:	49.	48.	45.	33.	42.	42.	45.	51.	41.
1310:	41.	58.	73.	75.	111.	93.	84.	72.	55.
1319:	32.	45.	41.	47.	52.	47.	34.	40.	37.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	9887.	6141.	3.27	1022.44	1011	29	1.648E 01	1.5
2	3	559.30	4238.	2044.	2.64	1118.93	1110	28	7.063E 00	2.2
3	3	564.13	167117.	1426.	2.35	1128.59	1110	28	2.785E 02	0.2
4	1	602.78	4599.	1044.	2.36	1205.83	1198	18	7.666E 00	1.8
5	1	645.82	289.	556.	2.40	1291.85	1286	13	4.819E-01	12.9
6	1	657.13	283.	534.	2.27	1314.44	1309	12	4.717E-01	13.0

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 \*\*\*\*\* 18 DEC 1979 9:15:00 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q195A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10493.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 1959:43 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5970.	19205.	0.0610	0.0006	1.1
%-ANTIMONY	564.1	5495.	186391.	0.7392	0.0020	0.3
%-ARSENIC	657.4	570.	0. <	0.0026	NOT DETECTABLE	

1009:	289.	285.	276.	289.	278.	292.	361.	461.	638.
1018:	958.	1512.	2107.	2761.	3068.	3049.	2614.	2082.	1462.
1027:	882.	596.	361.	300.	274.	220.	232.	206.	228.
1117:	364.	411.	427.	475.	563.	652.	1066.	2361.	6953.
1126:	16746.	28259.	35702.	35924.	29397.	18660.	8446.	2402.	469.
1135:	195.	166.	130.	113.	119.	105.	107.	101.	117.
1301:	52.	57.	56.	38.	45.	40.	38.	33.	44.
1310:	45.	46.	41.	42.	45.	47.	43.	30.	48.
1319:	45.	40.	54.	30.	41.	41.	38.	29.	47.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	19205.	5970.	3.18	1022.45	1011	24	3.201E 01	0.9
2	1	564.12	186391.	5495.	2.37	1128.58	1118	22	3.107E 02	0.2
3	1	602.76	5222.	1397.	2.39	1205.80	1195	22	8.704E 00	1.7
4	1	645.84	362.	833.	2.73	1291.89	1284	17	6.027E-01	12.5

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 \*\*\*\*\* 18 DEC 1979 9:16:09 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0195B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8478.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2010:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6495.	16728.	0.0664	0.0008	1.2
%-ANTIMONY	564.1	4660.	166155.	0.8171	0.0024	0.3
%-ARSENIC	657.4	541.	0. <	0.0031	NOT DETECTABLE	

1009:	243.	235.	254.	258.	253.	282.	323.	407.	587.
1018:	913.	1332.	1863.	2366.	2754.	2740.	2326.	1856.	1214.
1027:	756.	525.	386.	279.	233.	207.	202.	198.	211.
1117:	352.	349.	375.	447.	494.	628.	907.	2106.	6069.
1126:	14761.	25346.	32194.	32365.	25893.	16717.	7519.	2214.	453.
1135:	157.	113.	125.	106.	98.	94.	96.	103.	73.
1301:	54.	44.	36.	49.	35.	43.	44.	34.	41.
1310:	46.	40.	41.	48.	38.	39.	32.	43.	35.
1319:	39.	57.	42.	35.	37.	35.	50.	36.	41.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	16728.	6495.	3.10	1022.46	1011	30	2.788E 01	1.0
2	1	564.12	166155.	4660.	2.35	1128.57	1118	20	2.769E 02	0.3
3	1	602.78	4618.	1456.	2.36	1205.83	1194	25	7.697E 00	1.9
4	1	645.93	311.	486.	2.33	1292.06	1286	12	5.190E-01	11.5

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\*\*\*\*\* 18 DEC 1979 9:17:17 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: Q195C  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 9268.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 17DEC79 2020:56 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.1	6013.	17236.	0.0632	0.0007	1.1
%-ANTIMONY	564.1	4888.	166622.	0.7510	0.0022	0.3
%-ARSENIC	657.4	465.	0. <	0.0027	NOT DETECTABLE	

1009:	238.	220.	256.	265.	260.	302.	353.	418.	573.
1018:	887.	1277.	1904.	2412.	2827.	2701.	2360.	1974.	1288.
1027:	779.	563.	372.	269.	246.	170.	217.	198.	203.
1117:	350.	371.	398.	417.	524.	652.	988.	2086.	6073.
1126:	14866.	25437.	32477.	32187.	25984.	16712.	7502.	2252.	443.
1135:	170.	106.	117.	113.	97.	99.	100.	87.	97.
1301:	44.	38.	49.	45.	38.	35.	32.	37.	29.
1310:	33.	40.	38.	34.	44.	42.	37.	36.	37.
1319:	34.	31.	30.	36.	43.	27.	38.	45.	29.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	17236.	6013.	3.15	1022.51	1011	28	2.873E 01	1.0
2	1	564.12	166622.	4888.	2.35	1128.57	1118	21	2.777E 02	0.3
3	1	602.83	4666.	955.	2.36	1205.93	1195	20	7.777E 00	1.7
4	1	645.91	210.	594.	2.20	1292.03	1287	12	3.494E-01	17.0



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 \*\*\*\*\* 18 DEC 1979 9:18:27 AM \*\*\*\*\*  
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91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0196  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 1337.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2031:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1147.	3392.	0.0870	0.0020	2.3
%-ANTIMONY	564.2	1045.	19355.	0.6058	0.0047	0.8
%-ARSENIC	657.4	141.	0. <	0.0105	NOT DETECTABLE	

1009:	36.	34.	40.	42.	36.	37.	63.	66.	107.
1018:	161.	269.	361.	473.	539.	555.	453.	372.	236.
1027:	157.	81.	46.	48.	35.	26.	29.	36.	24.
1117:	60.	68.	83.	84.	75.	74.	116.	240.	651.
1126:	1637.	2952.	3871.	3806.	3234.	2018.	867.	284.	46.
1135:	12.	15.	8.	17.	11.	10.	14.	9.	19.
1301:	13.	8.	13.	11.	5.	12.	6.	10.	5.
1310:	12.	12.	13.	8.	11.	11.	9.	14.	12.
1319:	13.	9.	12.	13.	13.	11.	8.	5.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	3392.	1147.	3.12	1022.46	1012	33	5.654E 00	2.2
2	1	564.15	19355.	1045.	2.29	1128.63	1120	22	3.226E 01	0.8
3	1	602.72	625.	219.	2.62	1205.70	1195	23	1.041E 00	5.2

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\*\*\*\*\* 18 DEC 1979 9:19:37 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: 0197  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 7212.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 17DEC79 2041:48 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER: 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER	511.0	4560.	2623.	0.0126	0.0005	4.2
%-ANTIMONY	564.1	1548.	147157.	0.0555	0.0026	0.3
%-ARSENIC	657.1	553.	4707.	0.1590	0.0035	2.2
1009:	225.	240.	250.	268.	241.	268.
1018:	332.	403.	504.	616.	624.	648.
1027:	342.	272.	268.	257.	252.	247.
1117:	6773.	8748.	9025.	7427.	5059.	2634.
1126:	13146.	22328.	28132.	28120.	23452.	14682.
1135:	178.	155.	116.	124.	134.	119.
1301:	68.	67.	66.	71.	47.	73.
1310:	133.	262.	505.	815.	941.	976.
1319:	137.	66.	57.	29.	52.	53.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR
1	1	511.01	2623.	4560.	3.06	1022.43	1015	19	4.372E 00	4.1
2	2	559.16	45311.	1904.	2.36	1118.66	1107	33	7.552E 01	0.5
3	2	564.13	147157.	1548.	2.37	1128.58	1107	33	2.453E 02	0.3
4	1	602.78	3949.	1771.	2.37	1205.83	1195	22	6.582E 00	2.2
5	1	645.85	295.	777.	2.50	1291.89	1287	12	4.919E-01	14.6
6	3	657.14	4707.	553.	2.36	1314.46	1304	40	7.845E 00	1.6
7	3	665.35	363.	557.	3.08	1330.87	1304	40	6.052E-01	10.6

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 \*\*\*\*\* 18 DEC 1979 9:20:50 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q198  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10404.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2052:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 638. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6642.	3580.	0.0120	0.0004	3.7
%-ANTIMONY	564.1	2962.	213180.	0.8607	0.0022	0.3
%-ARSENIC	657.1	1840.	7104.	0.1671	0.0034	2.1

1009:	385.	359.	375.	389.	346.	401.	400.	433.	443.
1018:	524.	564.	728.	858.	955.	865.	838.	705.	571.
1027:	494.	417.	349.	368.	373.	362.	330.	318.	378.

1117:10070.	12830.	12982.	10883.	7331.	3749.	2336.	3192.	8243.	
1126:19217.	33180.	40969.	40723.	33376.	21026.	9532.	2903.	769.	
1135:	327.	244.	221.	249.	227.	226.	206.	209.	259.

1301:	93.	92.	104.	107.	84.	105.	126.	106.	127.
1310:	199.	377.	794.	1209.	1410.	1375.	1174.	741.	392.
1319:	104.	109.	96.	96.	87.	95.	82.	83.	105.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	3580.	6642.	3.02	1022.37	1013	18	5.967E 00	3.6
2	2	559.15	65732.	3552.	2.36	1118.64	1108	35	1.096E 02	0.4
3	2	564.11	213180.	2962.	2.37	1128.54	1108	35	3.553E 02	0.2
4	1	571.34	55.	1778.	0.67	1143.00	1142	9	9.139E-02	****
5	1	602.78	6025.	2300.	2.40	1205.83	1197	18	1.004E 01	1.7
6	1	645.83	556.	1496.	2.95	1291.87	1286	16	9.264E-01	10.7
7	1	657.13	7104.	1840.	2.44	1314.46	1305	20	1.184E 01	1.5
8	1	665.54	421.	1229.	2.67	1331.24	1325	13	7.024E-01	12.7

\*\*\*\*\*  
\*\*\*\*\* 18 DEC 1979 9:22:01 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
SAMPLE IDENTIFICATION: Q199  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 8404.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 17DEC79 2103:17 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
ELAPSED REAL TIME: 654. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER	511.0	9684.	4530.	0.0190	0.0007	3.5
X-ANTIMONY	564.1	4322.	296034.	1.4825	0.0035	0.2
X-ARSENIC	657.1	2615.	10202.	0.2986	0.0057	1.9

1009:	542.	541.	554.	591.	605.	584.	572.	599.	650.
1018:	706.	849.	996.	1138.	1234.	1217.	1116.	931.	821.
1027:	648.	601.	559.	545.	460.	503.	515.	484.	470.
1117:14918.	19047.	19228.	15755.	10610.	5637.	3229.	4769.	12088.	
1126:27628.	45773.	56956.	56451.	45955.	28765.	13071.	4058.	1077.	
1135:	591.	469.	458.	469.	400.	401.	403.	399.	395.
1301:	134.	168.	149.	171.	162.	149.	177.	167.	204.
1310:	345.	614.	1186.	1744.	2070.	2020.	1594.	1073.	556.
1319:	276.	170.	159.	137.	134.	136.	140.	129.	160.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	4530.	9684.	3.07	1022.47	1014	18	7.550E 00	3.4
2	2	559.14	97068.	4851.	2.36	1118.61	1107	35	1.618E 02	0.3
3	2	564.10	296034.	4322.	2.38	1128.52	1107	35	4.934E 02	0.2
4	1	602.76	8273.	3281.	2.35	1205.78	1198	17	1.379E 01	1.5
5	1	646.09	648.	2799.	3.12	1292.39	1285	18	1.080E 00	12.2
6	1	657.10	10202.	2615.	2.44	1314.39	1306	18	1.700E 01	1.2
7	1	665.36	621.	1814.	2.31	1330.89	1324	13	1.035E 00	10.5

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:23:12 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0200  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9078.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2114:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER	511.0	5117.	3239.	0.0127	0.0005	3.6
%-ANTIMONY	564.1	2235.	174909.	0.8125	0.0023	0.3
%-ARSENIC	657.2	1339.	5718.	0.1556	0.0034	2.2

1009:	321.	311.	292.	319.	325.	314.	313.	332.	370.
1018:	448.	508.	632.	739.	748.	772.	668.	633.	457.
1027:	377.	320.	278.	274.	291.	277.	280.	276.	304.
1117:	8097.	10411.	10408.	8709.	6032.	3135.	1780.	2550.	6635.
1126:	15812.	26785.	33416.	33730.	27322.	17521.	7850.	2358.	557.
1135:	237.	202.	192.	173.	180.	179.	158.	179.	180.
1301:	80.	70.	66.	71.	80.	60.	88.	82.	107.
1310:	187.	324.	595.	930.	1096.	1152.	942.	600.	344.
1319:	125.	75.	72.	88.	61.	73.	69.	81.	76.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR
1	1	510.99	3239.	5117.	3.22	1022.39	1014	17	5.399E 00	3.6
2	2	559.15	53274.	2663.	2.37	1118.64	1107	36	8.879E 01	0.5
3	2	564.12	174909.	2235.	2.37	1128.56	1107	36	2.915E 02	0.2
4	1	602.76	4830.	1628.	2.38	1205.79	1197	17	8.050E 00	1.9
5	1	646.05	339.	1134.	2.40	1292.29	1284	14	5.656E-01	15.0
6	1	657.17	5718.	1339.	2.46	1314.53	1306	19	9.529E 00	1.6
7	1	665.44	345.	1084.	2.42	1331.05	1325	16	5.751E-01	14.5

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:24:22 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0201  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9615.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2125:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 660. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	10526.	5283.	0.0198	0.0006	3.1
Z-ANTIMONY	564.1	4791.	326666.	1.4354	0.0033	0.2
Z-ARSENIC	657.1	3217.	11067.	0.2858	0.0054	1.9

1009:	604.	618.	614.	623.	619.	619.	642.	659.	686.
1018:	799.	961.	1085.	1247.	1379.	1379.	1205.	1083.	900.
1027:	726.	662.	592.	547.	550.	555.	634.	574.	531.
1117:	16705.	20797.	20927.	17311.	11502.	6224.	3529.	5217.	13483.
1126:	30726.	50696.	63278.	62221.	50303.	31531.	14428.	4391.	1394.
1135:	690.	596.	522.	472.	464.	473.	449.	480.	468.
1301:	191.	189.	167.	176.	184.	187.	173.	211.	232.
1310:	363.	703.	1272.	1984.	2397.	2277.	1737.	1104.	614.
1319:	307.	192.	167.	190.	165.	152.	210.	162.	184.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	5283.	10526.	3.16	1022.	46	1013	18 8.805E 00	3.1
2	2	559.13	107889.	5304.	2.41	1118.	60	1107	34 1.798E 02	0.3
3	2	564.09	326666.	4791.	2.38	1128.	51	1107	34 5.444E 02	0.2
4	1	602.77	9013.	4114.	2.39	1205.	81	1198	17 1.502E 01	1.5
5	1	645.92	675.	2482.	2.51	1292.	04	1285	14 1.126E 00	11.1
6	1	657.08	11067.	3217.	2.33	1314.	35	1305	18 1.844E 01	1.2
7	1	665.42	652.	2151.	2.30	1331.	01	1326	12 1.087E 00	10.8

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 \*\*\*\*\* 18 DEC 1979 9:25:34 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q202A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5536.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2136:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	161.	370.	0.0024	0.0002	7.1
%-ANTIMONY	564.2	270.	1814.	0.0139	0.0004	2.7
%-ARSENIC	657.4	96.	0. <	0.0022	NOT DETECTABLE	

1009:	3.	6.	5.	7.	8.	7.	7.	15.	15.
1018:	24.	28.	47.	43.	55.	54.	50.	33.	32.
1027:	21.	15.	12.	16.	5.	7.	7.	10.	5.
1117:	8.	5.	12.	16.	10.	8.	19.	24.	81.
1126:	146.	277.	365.	386.	302.	209.	78.	27.	12.
1135:	5.	11.	4.	5.	10.	4.	6.	3.	9.
1301:	6.	10.	6.	2.	6.	7.	10.	4.	13.
1310:	0.	5.	8.	3.	8.	6.	7.	5.	8.
1319:	7.	9.	9.	7.	6.	10.	7.	3.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	370.	161.	3.58	1022.37	1011	28	6.165E-01	7.1
2	1	564.17	1814.	270.	2.27	1128.67	1121	23	3.024E 00	2.7
3	1	603.35	99.	70.	3.55	1206.97	1198	14	1.650E-01	15.6

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:26:40 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q202B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6276.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2146:34 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NET ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	193.	304.	0.0018	0.0002	8.7
%-ANTIMONY	564.2	180.	2202.	0.0149	0.0003	2.3
%-ARSENIC	657.4	96.	0. <	0.0019	NOT DETECTABLE	

1009:	9.	7.	4.	18.	12.	9.	17.	14.	25.
1018:	16.	30.	36.	52.	55.	56.	41.	41.	32.
1027:	17.	19.	12.	7.	11.	13.	11.	12.	10.
1117:	5.	10.	14.	16.	13.	21.	14.	36.	84.
1126:	182.	335.	431.	419.	394.	236.	109.	48.	10.
1135:	5.	9.	7.	11.	8.	3.	5.	6.	6.
1301:	9.	6.	2.	6.	7.	4.	6.	9.	7.
1310:	9.	9.	9.	6.	7.	6.	6.	4.	6.
1319:	10.	7.	10.	9.	9.	8.	5.	5.	4.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	304.	193.	3.06	1022.37	1011	22	5.064E-01	8.6
2	1	564.19	2202.	180.	2.34	1128.70	1121	16	3.670E-00	2.3
3	1	602.20	106.	121.	4.34	1204.68	1198	21	1.769E-01	17.6



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 \*\*\*\*\* 18 DEC 1979 9:27:44 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0202C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10873.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2156:49 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	320.	464.	0.0016	0.0001	7.2
%-ANTIMONY	564.2	175.	3902.	0.0152	0.0003	1.7
%-ARSENIC	657.4	104.	0. <	0.0012	NOT DETECTABLE	

1009:	12.	11.	11.	20.	21.	17.	16.	18.	21.
1018:	44.	44.	59.	73.	100.	95.	88.	54.	42.
1027:	25.	16.	9.	12.	7.	10.	12.	12.	11.
1117:	19.	16.	18.	13.	12.	16.	16.	55.	153.
1126:	316.	564.	750.	748.	668.	417.	197.	72.	19.
1135:	14.	4.	10.	13.	9.	5.	5.	8.	10.
1301:	7.	10.	6.	10.	9.	9.	8.	8.	10.
1310:	5.	7.	9.	7.	10.	15.	9.	8.	8.
1319:	5.	6.	5.	12.	7.	5.	4.	8.	9.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	464.	320.	2.65	1022.59	1014	21	7.740E-01	7.2
2	1	564.19	3902.	175.	2.36	1128.70	1121	20	6.504E 00	1.7
3	1	602.68	118.	190.	2.59	1205.63	1200	20	1.972E-01	18.9

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 \*\*\*\*\* 18 DEC 1979 9:28:54 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q203A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11501.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2207:03 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-0 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	1274.	734.	0.0024	0.0002	7.8
%-ANTIMONY	564.1	299.	33648.	0.1245	0.0007	0.6
%-ARSENIC	657.4	127.	0. <	0.0012	NOT DETECTABLE	

1009:	36.	42.	39.	53.	57.	48.	61.	57.	56.
1010:	77.	106.	140.	142.	174.	161.	122.	106.	93.
1027:	71.	50.	49.	42.	41.	49.	37.	41.	47.
1117:	118.	125.	127.	129.	108.	136.	202.	428.	1164.
1126:	2905.	5032.	6403.	6530.	5399.	3472.	1606.	482.	74.
1135:	23.	20.	10.	30.	17.	14.	11.	20.	24.
1301:	8.	5.	9.	8.	8.	12.	11.	13.	14.
1310:	5.	9.	9.	8.	12.	14.	14.	14.	4.
1319:	8.	5.	11.	9.	11.	7.	13.	10.	10.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.84	734.	1274.	3.01	1022.09	1014	26	1.223E 00	7.8
2	4	559.45	639.	487.	3.21	1119.24	1110	33	1.066E 00	6.3
3	4	564.15	33648.	299.	2.36	1128.62	1110	33	5.608E 01	0.5
4	1	602.87	991.	394.	2.26	1206.00	1195	35	1.652E 00	4.3

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:29:58 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q203B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11191.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2217:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 606. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	945.	808.	0.0027	0.0002	6.5
%-ANTIMONY	564.2	1404.	34956.	0.1332	0.0008	0.6
%-ARSENIC	657.4	176.	0. <	0.0015	NOT DETECTABLE	

1009:	44.	52.	42.	57.	51.	57.	53.	41.	53.
1018:	87.	103.	117.	152.	163.	151.	145.	109.	94.
1027:	69.	50.	56.	47.	38.	48.	41.	37.	34.
1117:	96.	121.	141.	138.	142.	135.	203.	374.	1224.
1126:	2986.	5248.	6691.	6940.	5760.	3667.	1654.	462.	94.
1135:	19.	13.	14.	19.	18.	12.	20.	12.	16.
1301:	10.	13.	10.	16.	6.	15.	12.	13.	8.
1310:	6.	13.	15.	21.	13.	17.	22.	18.	15.
1319:	11.	7.	10.	10.	6.	7.	12.	12.	7.

PULSE- FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.93	808.	945.	3.32	1022.28	1011	21	1.346E 00	6.4
2	1	564.16	34956.	1404.	2.33	1128.65	1120	18	5.826E 01	0.6
3	1	602.81	1031.	236.	2.39	1205.89	1197	16	1.718E 00	3.8

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 \*\*\*\*\* 18 DEC 1979 9:31:02 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 0203C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12103.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TRB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2227:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932263 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	941.	707.	0.0022	0.0002	7.2
%-ANTIMONY	564.2	1510.	34383.	0.1214	0.0007	0.6
%-ARSENIC	657.4	148.	0. <	0.0012	NOT DETECTABLE	

1009:	49.	42.	50.	48.	43.	50.	60.	51.	66.
1018:	71.	84.	100.	140.	161.	155.	145.	130.	104.
1027:	76.	39.	52.	49.	51.	48.	41.	45.	38.
1117:	98.	116.	137.	136.	138.	158.	191.	427.	1201.
1126:	2928.	5141.	6643.	6783.	5592.	3707.	1625.	444.	91.
1135:	27.	18.	21.	9.	12.	17.	16.	12.	13.
1301:	14.	10.	5.	10.	8.	11.	8.	12.	9.
1310:	4.	13.	9.	19.	11.	20.	19.	7.	7.
1319:	11.	10.	9.	10.	11.	9.	13.	13.	11.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.22	707.	941.	3.00	1022.85	1012	19	1.178E 00	7.2
2	1	564.16	34383.	1510.	2.34	1128.65	1120	20	5.730E 01	0.6
3	1	602.79	1021.	192.	2.30	1205.85	1198	16	1.702E 00	3.7

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:32:06 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q204A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8918.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2237:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	616.	9200.	0.0397	0.0005	1.2
%-ANTIMONY	564.3	294.	466.	0.0022	0.0002	7.0
%-ARSENIC	657.4	109.	0. <	0.0015	NOT DETECTABLE	

1009:	30.	40.	28.	40.	39.	54.	88.	110.	196.
1018:	327.	605.	914.	1251.	1353.	1385.	1164.	923.	600.
1027:	352.	182.	91.	67.	29.	24.	17.	11.	12.
1117:	11.	15.	5.	8.	12.	13.	16.	11.	25.
1126:	42.	65.	94.	99.	96.	64.	28.	13.	9.
1135:	10.	5.	13.	9.	9.	6.	14.	11.	9.
1301:	10.	11.	10.	10.	5.	11.	10.	10.	7.
1310:	10.	10.	5.	8.	10.	7.	13.	11.	8.
1319:	4.	9.	7.	9.	5.	7.	11.	8.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	9200.	616.	3.15	1022.47	1011	28	1.533E 01	1.1
2	1	564.29	466.	294.	2.34	1128.91	1120	28	7.768E-01	7.0

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:33:08 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q204B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9279.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2248:12 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	416.	7854.	0.0329	0.0004	1.3
%-ANTIMONY	564.3	184.	330.	0.0015	0.0001	8.0
%-ARSENIC	657.4	135.	0. <	0.0016	NOT DETECTABLE	

1009:	23.	25.	21.	22.	40.	39.	69.	85.	171.
1010:	293.	511.	745.	941.	1105.	1127.	983.	826.	544.
1027:	266.	149.	92.	35.	31.	23.	13.	8.	3.
1117:	5.	6.	12.	11.	9.	11.	8.	15.	18.
1126:	30.	36.	85.	71.	75.	36.	26.	7.	9.
1135:	12.	13.	8.	14.	8.	16.	5.	5.	8.
1301:	9.	6.	8.	11.	6.	5.	4.	5.	6.
1310:	13.	9.	8.	8.	9.	18.	15.	13.	9.
1319:	8.	11.	8.	11.	10.	10.	7.	5.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	7854.	416.	3.34	1022.63	1011	26	1.309E 01	1.2
2	1	564.26	330.	184.	2.06	1128.85	1121	23	5.496E-01	8.0

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:34:10 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q204C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11976.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2258:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	438.	9887.	0.0324	0.0004	1.2
%-ANTIMONY	564.1	162.	428.	0.0015	0.0001	6.4
%-ARSENIC	657.4	93.	0. <	0.0010	NOT DETECTABLE	

1009:	25.	21.	27.	40.	34.	35.	77.	115.	217.
1018:	390.	638.	976.	1332.	1471.	1468.	1342.	954.	631.
1027:	392.	221.	126.	56.	18.	20.	13.	9.	16.
1117:	6.	2.	11.	8.	10.	3.	10.	8.	22.
1126:	50.	76.	87.	75.	80.	48.	26.	10.	10.
1135:	8.	12.	9.	7.	10.	4.	8.	11.	5.
1301:	9.	8.	8.	6.	8.	3.	5.	5.	9.
1310:	9.	5.	5.	5.	8.	9.	7.	10.	8.
1319:	7.	7.	4.	5.	9.	6.	9.	8.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1	1	511.04	9887.	438.	3.10	1022.49	1011	24	1.648E 01	1.0
2	1	564.08	428.	162.	2.51	1128.49	1117	19	7.136E-01	6.4

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 \*\*\*\*\* 18 DEC 1979 9:35:16 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q205A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9347.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2308:41 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	760.	740.	0.0031	0.0002	6.4
%-ANTIMONY	564.2	1345.	29993.	0.1381	0.0009	0.6
%-ARSENIC	657.4	161.	0. <	0.0017	NOT DETECTABLE	

1009:	52.	52.	40.	35.	40.	44.	42.	53.	52.
1018:	77.	87.	91.	120.	143.	147.	134.	106.	81.
1027:	63.	57.	52.	48.	31.	32.	45.	31.	41.
1117:	112.	105.	115.	132.	113.	128.	176.	359.	1081.
1126:	2588.	4494.	5875.	5835.	4924.	3180.	1359.	423.	83.
1135:	18.	19.	15.	14.	10.	12.	14.	14.	11.
1301:	14.	12.	12.	17.	8.	8.	9.	4.	7.
1310:	7.	11.	17.	15.	13.	18.	18.	13.	12.
1319:	12.	9.	9.	6.	13.	10.	7.	9.	12.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CIS/SEC	%ERR
1	1	511.06	740.	760.	3.35	1022.53	1013	20	1.233E 00	6.4
2	1	564.15	29993.	1345.	2.33	1128.64	1120	20	4.999E 01	0.6
3	1	602.84	901.	323.	2.47	1205.96	1195	30	1.501E 00	4.4
4	1	645.85	75.	230.	2.47	1291.91	1284	18	1.256E-01	30.7



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 \*\*\*\*\* 18 DEC 1979 9:36:20 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q205B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8898.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2319:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	907.	681.	0.0031	0.0002	7.3
%-ANTIMONY	564.2	1373.	33781.	0.1637	0.0010	0.6
%-ARSENIC	657.4	174.	0. <	0.0019	NOT DETECTABLE	

1009:	48.	46.	42.	44.	54.	62.	50.	49.	63.
1010:	77.	91.	111.	119.	143.	155.	141.	129.	86.
1027:	65.	49.	50.	49.	46.	40.	43.	36.	43.
1117:	116.	118.	132.	136.	124.	148.	179.	381.	1093.
1126:	2800.	5100.	6552.	6577.	5597.	3606.	1576.	471.	106.
1135:	24.	21.	16.	21.	12.	27.	13.	15.	14.
1301:	12.	15.	15.	14.	15.	8.	9.	12.	12.
1310:	11.	11.	19.	19.	14.	19.	17.	10.	12.
1319:	13.	9.	8.	12.	12.	11.	9.	7.	10.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.26	681.	907.	3.15	1022.92	1015	19	1.136E 00	7.3
2	1	564.17	33781.	1373.	2.31	1128.66	1120	18	5.630E 01	0.6
3	1	602.82	1011.	185.	2.34	1205.90	1197	18	1.686E 00	3.7

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:37:27 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: Q205C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9437.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2329:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	908.	709.	0.0030	0.0002	7.1
%-ANTIMONY	564.2	226.	31786.	0.1455	0.0008	0.6
%-ARSENIC	657.4	154.	0. <	0.0017	NOT DETECTABLE	

1009:	60.	37.	39.	43.	37.	58.	44.	43.	61.
1018:	59.	70.	112.	101.	136.	153.	134.	127.	87.
1027:	76.	74.	42.	45.	49.	28.	41.	42.	35.
1117:	85.	128.	116.	131.	125.	131.	164.	332.	1101.
1126:	2711.	4748.	6002.	6141.	5022.	3325.	1537.	432.	71.
1135:	24.	22.	17.	14.	16.	25.	21.	16.	18.
1301:	11.	14.	12.	12.	3.	14.	13.	14.	8.
1310:	11.	11.	15.	17.	10.	14.	15.	12.	6.
1319:	11.	8.	16.	9.	10.	8.	9.	11.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.27	709.	908.	3.19	1022.95	1012	22	1.181E 00	7.1
2	6	559.38	471.	209.	1.54	1119.09	1109	29	7.846E-01	6.3
3	6	564.15	31786.	226.	2.37	1128.63	1109	29	5.298E 01	0.6
4	1	602.74	911.	630.	2.47	1205.75	1195	35	1.519E 00	5.1
5	1	645.43	124.	150.	2.79	1291.07	1283	15	2.068E-01	16.6

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 \*\*\*\*\* 18 DEC 1979 9:38:38 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 5626A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10957.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2339:36 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5767.	20863.	0.0775	0.0008	1.0
%-ANTIMONY	564.1	1572.	182693.	0.7214	0.0020	0.3
%-ARSENIC	657.5	907.	196.	0.0047	0.0011	22.9

1009:	286.	280.	254.	300.	306.	299.	372.	471.	685.
1018:	1097.	1619.	2310.	2878.	3506.	3392.	2934.	2276.	1488.
1027:	945.	596.	363.	334.	261.	223.	243.	226.	222.
1117:	523.	588.	631.	642.	642.	720.	1058.	2286.	6507.
1126:	15733.	27464.	35451.	35676.	28900.	18620.	8528.	2450.	590.
1135:	185.	138.	117.	126.	106.	107.	113.	118.	82.
1301:	50.	53.	37.	51.	51.	51.	49.	41.	33.
1310:	37.	64.	38.	61.	55.	76.	67.	58.	34.
1319:	62.	45.	40.	42.	40.	48.	41.	43.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1	1	511.03	20863.	5767.	3.06	1022.47	1011	23	3.477E 01	0.9
2	5	559.70	2190.	1257.	1.72	1119.72	1109	37	3.650E 00	3.1
3	5	564.14	182693.	1572.	2.34	1128.60	1109	37	3.045E 02	0.2
4	1	602.79	5332.	1570.	2.42	1205.86	1194	23	8.886E 00	1.7
5	1	645.85	311.	542.	2.15	1291.90	1287	11	5.182E-01	12.0
6	1	657.47	196.	907.	4.34	1315.14	1306	19	3.264E-01	22.9

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 \*\*\*\*\* 18 DEC 1979 9:39:52 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 5626B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10664.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 17DEC79 2350:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	5549.	19748.	0.0761	0.0006	1.0
Z-ANTIMONY	564.1	1441.	177048.	0.7197	0.0020	0.3
Z-ARSENIC	657.0	903.	118. <	0.0035	NOT DETECTABLE	

1009:	260.	293.	298.	268.	267.	289.	323.	438.	617.
1018:	1044.	1473.	2226.	2770.	3146.	3150.	2740.	2217.	1422.
1027:	898.	579.	364.	291.	267.	220.	226.	208.	191.
1117:	486.	564.	559.	587.	636.	684.	973.	2255.	6222.
1126:	15454.	26619.	33944.	34360.	28175.	18054.	8080.	2409.	513.
1135:	200.	123.	124.	131.	109.	106.	103.	98.	97.
1301:	46.	37.	46.	53.	53.	42.	40.	46.	29.
1310:	45.	46.	51.	67.	77.	68.	57.	49.	46.
1319:	42.	40.	38.	37.	45.	39.	38.	33.	32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	19748.	5549.	3.14	1022.49	1012	23	3.291E 01	0.9
2	7	559.63	2065.	972.	1.37	1119.60	1109	30	3.442E 00	3.1
3	7	564.14	177048.	1441.	2.35	1128.60	1109	30	2.951E 02	0.2
4	1	602.79	5146.	1169.	2.42	1205.84	1195	19	8.576E 00	1.7
5	1	645.88	380.	799.	2.99	1291.97	1287	17	6.334E-01	11.7
6	1	656.95	118.	903.	2.13	1314.10	1305	19	1.974E-01	37.0

\*\*\*\*\* 18 DEC 1979 9:41:04 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00

SAMPLE IDENTIFICATION: 5626C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8908.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 0:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4364.	17398.	0.0810	0.0009	1.1
%-ANTIMONY	564.1	1231.	147418.	0.7187	0.0021	0.3
%-ARSENIC	657.4	545.	0. <	0.0033	NOT DETECTABLE	

1009:	232.	227.	179.	221.	236.	252.	291.	363.	563.
1018:	892.	1270.	1890.	2438.	2841.	2685.	2469.	1819.	1317.
1027:	819.	459.	326.	237.	203.	194.	178.	175.	175.
1117:	424.	429.	494.	519.	492.	592.	827.	1704.	5160.
1126:	12577.	21995.	28172.	28675.	23706.	15232.	6858.	2014.	452.
1135:	113.	91.	95.	88.	78.	75.	85.	72.	69.
1301:	43.	30.	47.	36.	35.	36.	34.	27.	38.
1310:	29.	42.	46.	45.	58.	57.	40.	53.	34.
1319:	36.	36.	31.	21.	24.	46.	26.	28.	32.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1.	511.04	17398.	4364.	3.12	1022.49	1011	23	2.900E 01	0.9
2	10	559.67	1913.	840.	1.35	1119.68	1108	38	3.189E 00	3.1
3	10	564.15	147418.	1231.	2.35	1128.63	1108	38	2.457E 02	0.3
4	1.	602.81	4320.	905.	2.35	1205.89	1195	20	7.200E 00	1.8
5	1.	646.15	280.	623.	2.64	1292.50	1284	15	4.673E-01	13.9

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:42:12 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: S604A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8652.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 11:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 650. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-0 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7193.	1267.	0.0061	0.0006	9.9
%-ANTIMONY	564.1	3838.	366148.	1.8414	0.0040	0.2
%-ARSENIC	657.1	1876.	3158.	0.0975	0.0029	3.0

1009:	584.	502.	477.	523.	514.	519.	537.	523.	509.
1018:	544.	587.	633.	701.	712.	679.	629.	620.	603.
1027:	505.	494.	514.	481.	477.	472.	486.	456.	429.
1117:	5111.	6375.	6706.	5603.	4194.	2807.	2569.	4932.	13698.
1126:	32444.	55836.	70149.	70212.	57634.	36707.	16610.	5157.	1310.
1135:	553.	466.	440.	407.	378.	328.	349.	336.	314.
1301:	114.	132.	133.	130.	124.	127.	115.	120.	144.
1310:	172.	260.	447.	598.	732.	708.	577.	393.	240.
1319:	157.	116.	126.	106.	121.	109.	115.	126.	114.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	1267.	7193.	3.24	1022.37	1016	14	2.112E 00	9.9
2	3	559.18	32267.	4398.	2.38	1118.70	1108	34	5.378E 01	0.6
3	3	564.12	366148.	3838.	2.37	1128.57	1108	34	6.102E 02	0.2
4	1	602.77	10544.	3145.	2.35	1205.81	1196	19	1.757E 01	1.2
5	1	645.86	802.	1557.	2.87	1291.92	1286	13	1.337E 00	7.8
6	1	657.11	3158.	1876.	2.39	1314.40	1307	16	5.264E 00	2.6

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:43:22 AM \*\*\*\*\*  
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91119065 RF LEAD-SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: S604B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9725.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 22:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 659. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	7767.	1975.	0.0086	0.0006	6.7
%-ANTIMONY	564.1	4550.	419937.	1.8826	0.0040	0.2
%-ARSENIC	657.2	2328.	3570.	0.0985	0.0029	2.9

1009:	605.	621.	602.	551.	632.	582.	583.	574.	627.
1018:	676.	716.	781.	772.	856.	785.	749.	716.	661.
1027:	588.	561.	540.	522.	582.	523.	553.	523.	545.
1117:	5608.	7088.	7280.	6368.	4545.	3209.	2978.	5792.	16224.
1126:	37612.	64124.	80162.	80634.	65086.	42183.	19110.	6187.	1712.
1135:	778.	624.	584.	555.	464.	405.	421.	428.	401.
1301:	164.	148.	152.	171.	158.	139.	165.	141.	166.
1310:	186.	301.	494.	678.	823.	816.	686.	478.	289.
1319:	189.	131.	131.	135.	143.	132.	156.	124.	150.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.83	1975.	7767.	3.53	1022.00	1016	14	3.292E 00	6.7
2	2	559.18	35355.	5090.	2.36	1118.70	1107	35	5.892E 01	0.6
3	2	564.12	419937.	4550.	2.38	1128.56	1107	35	6.999E 02	0.2
4	1	573.40	148.	4311.	4.83	1147.11	1141	12	2.461E-01	63.4
5	1	602.77	12327.	3812.	2.37	1205.81	1198	17	2.055E 01	1.1
6	1	645.86	794.	2408.	2.78	1291.93	1285	15	1.324E 00	9.4
7	1	657.15	3570.	2328.	2.41	1314.49	1307	16	5.950E 00	2.5

\*\*\*\*\*  
 \*\*\*\*\* 18 DEC 1979 9:44:32 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD--SECOND IRRADIATION

SAMPLE DATE: 17DEC79 1017:00  
 SAMPLE IDENTIFICATION: 5604C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9177.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 33:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 4.000  
 ELAPSED REAL TIME: 655. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 0.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	8740.	1480.	0.0069	0.0006	9.3
%-ANTIMONY	564.1	4313.	399413.	1.9012	0.0041	0.2
%-ARSENIC	657.1	1811.	3531.	0.1038	0.0029	2.8

1009:	561.	585.	603.	540.	582.	528.	572.	584.	629.
1018:	570.	611.	704.	767.	739.	773.	757.	684.	638.
1027:	561.	586.	527.	548.	500.	529.	489.	515.	490.
1117:	5406.	6771.	7016.	6079.	4498.	2972.	2827.	5467.	15057.
1126:	35529.	60508.	76551.	76099.	62579.	40304.	18456.	5699.	1501.
1135:	668.	584.	538.	463.	442.	397.	417.	400.	373.
1301:	145.	139.	116.	135.	140.	118.	128.	132.	124.
1310:	176.	260.	439.	708.	783.	776.	665.	441.	257.
1319:	155.	128.	112.	125.	121.	123.	132.	129.	112.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	1480.	8740.	2.93	1022.56	1014	16	2.467E 00	9.3
2	2	559.18	34044.	4833.	2.37	1118.70	1107	34	5.674E 01	0.6
3	2	564.12	399413.	4313.	2.38	1128.58	1107	34	6.657E 02	0.2
4	1	602.78	11587.	4253.	2.40	1205.83	1195	21	1.931E 01	1.2
5	1	646.04	706.	2062.	2.26	1292.28	1285	14	1.176E 00	9.8
6	1	657.13	3531.	1811.	2.37	1314.45	1307	15	5.885E 00	2.4



3

Lab#  
9119065 SQY

3<sup>rd</sup> Irradiation  
12/18/79

SAMPLE	SAM. WT.	%-COPPER	%-ANTIMONY	%-ARSENIC
Q206A	11852.000	0.00220	0.03073	< 0.00126
Q206B	11527.000	0.00220	0.03150	< 0.00124
Q206C	13738.000	0.00205	0.03174	< 0.00117
		0.00215 AVG	0.03132 AVG	0.00000 AVG
		0.000086 SD	0.000529 SD	0.000000 SD
		3.982831 %RSD	1.687976 %RSD	0.000000 %RSD
Q207A	11259.000	0.00224	0.11118	< 0.00155
Q207B	8787.000	0.00252	0.11181	< 0.00174
Q207C	9351.000	0.00221	0.10692	< 0.00164
		0.00233 AVG	0.10997 AVG	0.00000 AVG
		0.000171 SD	0.002658 SD	0.000000 SD
		7.345883 %RSD	2.417009 %RSD	0.000000 %RSD
Q208A	9073.000	0.00210	0.10785	< 0.00153
Q208B	10127.000	0.00256	0.10765	< 0.00141
Q208C	8632.000	0.00214	0.11331	< 0.00170
		0.00227 AVG	0.10960 AVG	0.00000 AVG
		0.000255 SD	0.003211 SD	0.000000 SD
		11.241609 %RSD	2.929610 %RSD	0.000000 %RSD
Q209A	11542.000	0.00202	0.02990	< 0.00104
Q209B	11403.000	0.00224	0.03156	< 0.00106
Q209C	9651.000	0.00230	0.03220	< 0.00116
		0.00219 AVG	0.03122 AVG	0.00000 AVG
		0.000148 SD	0.001184 SD	0.000000 SD
		6.742258 %RSD	3.793168 %RSD	0.000000 %RSD
Q210	7485.000	0.00356	0.78247	0.15272
Q211	10875.000	0.00469	0.00023	0.17301
Q212	8525.000	0.00468	0.78289	0.16349
Q213	8987.000	0.00358	0.75425	0.15583
Q214	9092.000	0.00226	0.71166	0.12493
Q215A	11010.000	0.00273	0.60700	< 0.00266
Q215B	9062.000	0.00319	0.59978	< 0.00283
Q215C	9175.000	0.00369	0.62120	< 0.00298
		0.00387 AVG	0.60933 AVG	0.00000 AVG
		0.001593 SD	0.010901 SD	0.000000 SD
		1.899543 %RSD	1.788968 %RSD	0.000000 %RSD
Q216A	10107.000	0.07985	0.55559	< 0.00253
Q216B	8743.000	0.07973	0.55109	< 0.00266
Q216C	8482.000	0.07686	0.52833	< 0.00273
		0.07881 AVG	0.54500 AVG	0.00000 AVG
		0.001693 SD	0.014614 SD	0.000000 SD
		2.147540 %RSD	2.681482 %RSD	0.000000 %RSD

Q217A	9827.000	0.05576	0.71000	<	0.00288
Q217B	9596.000	0.05484	0.68827	<	0.00276
Q217C	10423.000	0.05411	0.71227	<	0.00276
		0.05491 AVG	0.70570 AVG		0.00000 AVG
		0.000828 SD	0.015255 SD		0.000000 SD
		1.508112 %RSD	2.161627 %RSD		0.000000 %RSD

Q218A	9990.000	0.00256	0.13030	<	0.00161
Q218B	8442.000	0.00284	0.12169	<	0.00164
Q218C	9473.000	0.00248	0.12616	<	0.00160
		0.00263 AVG	0.12605 AVG		0.00000 AVG
		0.000191 SD	0.004305 SD		0.000000 SD
		7.288915 %RSD	3.415428 %RSD		0.000000 %RSD

Q228A	9410.000	0.00238	0.03134	<	0.00107
Q228B	9208.000	0.00217	0.03047	<	0.00135
Q228C	8913.000	0.00222	0.03083	<	0.00144
		0.00226 AVG	0.03088 AVG		0.00000 AVG
		0.000112 SD	0.000436 SD		0.000000 SD
		4.936715 %RSD	1.413453 %RSD		0.000000 %RSD

Q229A	5291.000	0.00334	0.12788	<	0.00270
Q229B	4507.000	0.00333	0.12594	<	0.00337
Q229C	8475.000	0.00288	0.12891	<	0.00187
		0.00319 AVG	0.12757 AVG		0.00000 AVG
		0.000263 SD	0.001507 SD		0.000000 SD
		8.244488 %RSD	1.181537 %RSD		0.000000 %RSD

Q230A	10140.000	0.00254	0.11326	<	0.00153
Q230B	7129.000	0.00200	0.10925	<	0.00192
Q230C	3512.000	0.00262	0.10744	<	0.00342
		0.00239 AVG	0.10998 AVG		0.00000 AVG
		0.000340 SD	0.002980 SD		0.000000 SD
		14.240730 %RSD	2.709568 %RSD		0.000000 %RSD

Q231A	8593.000	0.00293	0.13508	<	0.00164
Q231B	10892.000	0.00280	0.12706	<	0.00146
Q231C	7681.000	0.00264	0.12892	<	0.00186
		0.00279 AVG	0.13062 AVG		0.00000 AVG
		0.000144 SD	0.003900 SD		0.000000 SD
		5.161575 %RSD	2.985747 %RSD		0.000000 %RSD

Q232A	8435.000	0.00206	0.02955	<	0.00124
Q232B	9165.000	0.00164	0.02895	<	0.00114
Q232C	9432.000	0.00178	0.03076	<	0.00117
		0.00183 AVG	0.02975 AVG		0.00000 AVG
		0.000215 SD	0.000925 SD		0.000000 SD
		11.783684 %RSD	3.109001 %RSD		0.000000 %RSD

Q233A	12320.000	0.00226	0.02908	<	0.00092
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Q233B	6626.000	0.00253	0.02989	<	0.00155
Q233C	9634.000	0.00220	0.02909	<	0.00118
		0.00233 AVG	0.02965 AVG		0.00000 AVG
		0.000179 SD	0.000497 SD		0.000000 SD
		7.673418 %RSD	1.677328 %RSD		0.000000 %RSD
Q234A	8570.000	0.00231	0.10428	<	0.00167
Q234B	5308.000	0.00216	0.10378	<	0.00235
Q234C	3665.000	0.00253	0.10772	<	0.00321
		0.00234 AVG	0.10526 AVG		0.00000 AVG
		0.000185 SD	0.002145 SD		0.000000 SD
		7.904153 %RSD	2.038127 %RSD		0.000000 %RSD
Q235A	8812.000	0.00269	0.11793	<	0.00175
Q235B	5545.000	0.00229	0.11678	<	0.00233
Q235C	6203.000	0.00293	0.11473	<	0.00222
		0.00264 AVG	0.11648 AVG		0.00000 AVG
		0.000322 SD	0.001620 SD		0.000000 SD
		12.225515 %RSD	1.390989 %RSD		0.000000 %RSD
Q236A	11815.000	0.00253	0.12000	<	0.00144
Q236B	9961.000	0.00249	0.11497	<	0.00151
Q236C	5924.000	0.00206	0.11601	<	0.00226
		0.00236 AVG	0.11699 AVG		0.00000 AVG
		0.000262 SD	0.002659 SD		0.000000 SD
		11.125896 %RSD	2.272750 %RSD		0.000000 %RSD
Q239A	8751.000	0.07997	0.58695	<	0.00318
Q239B	8429.000	0.07634	0.57746	<	0.00325
Q239C	8501.000	0.08218	0.58907	<	0.00339
		0.07949 AVG	0.58449 AVG		0.00000 AVG
		0.002948 SD	0.006185 SD		0.000000 SD
		3.708819 %RSD	1.058180 %RSD		0.000000 %RSD
Q240A	9207.000	0.00141	0.04973	<	0.00142
Q240B	10669.000	0.00150	0.05086	<	0.00123
Q240C	10333.000	0.00141	0.04978	<	0.00130
		0.00144 AVG	0.05012 AVG		0.00000 AVG
		0.000054 SD	0.000641 SD		0.000000 SD
		3.718303 %RSD	1.278106 %RSD		0.000000 %RSD
5626A	9497.000	0.07753	0.71610	<	0.00351
5626B	9747.000	0.07549	0.71291	<	0.00349
5626C	10186.000	0.08111	0.73067		0.00581
		0.07804 AVG	0.71989 AVG		0.00581 AVG
		0.002843 SD	0.009469 SD		0.000000 SD
		3.642533 %RSD	1.315351 %RSD		0.000000 %RSD
5604A	8210.000	0.00710	1.80429		0.10502
5604B	9534.000	0.00973	1.80233		0.09796
5604C	9555.000	0.00692	1.72033		0.09722

0.00792 AVG  
0.001573 SD  
19.874302 %RSD

1.77505 AVG  
0.047015 SD  
2.69048 %RSD

0.10007 AVG  
0.004303 SD  
4.300308 %RSD

3rd irradiation  
12/18/79.

(TI)TITLE:  
91119065 RF LEAD-THIRD IRRADIATION  
(LN)LIBRARY:  
(SA)SAMPLE TIME: 18DEC79 1020:00  
(SE)STD ENERGY TOLERANCE: 1.75  
(UE)UNK ENERGY TOLERANCE: 1.75  
(TF)THERMAL FLUX: 0.0000E-01  
(EF)EPITHERMAL FLUX: 0.0000E-01  
(FF)FAST FLUX: 0.0000E-01  
(QU)UNITS: UG

	ELEMENT	ENERGY	HALF-LIFE	SEC
1	%-COPPER	511.00	1.2800E 01 H	4.6080E 04
2	%-ANTIMONY	564.09	2.7200E 00 D	2.3501E 05
3	%-ARSENIC	657.41	2.6300E 01 H	9.4680E 04

#### STANDARD SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626A	9497.00	FBI1 .A01	100.0	100000.0
2	S626B	9747.00	FBI1 .A02	100.0	100000.0
3	S626C	10186.00	FBI1 .A03	100.0	100000.0
4	S604A	8210.00	FBI1 .A04	100.0	100000.0
5	S604B	9534.00	FBI1 .A05	100.0	100000.0
6	S604C	9555.00	FBI1 .A06	100.0	100000.0

STD: 1 S626A FILE= FBI1 .A01

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.0000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 2 S626B FILE= FBI1 .A02

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.0000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 3 S626C FILE= FBI1 .A03

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.0000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 4 S604A FILE= FBI1 .A04

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 5 S604B FILE= FBI1 .A05

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.00	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 6 56040

FILE= FBI1 .A06

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

# UNKNOWN SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	Q206A	11852.00	FBI1 .A07	100.0	100000.0
2	Q206B	11527.00	FBI1 .A08	100.0	100000.0
3	Q206C	13738.00	FBI1 .A09	100.0	100000.0
4	Q207A	11259.00	FBI1 .A10	100.0	100000.0
5	Q207B	8787.00	FBI1 .A11	100.0	100000.0
6	Q207C	9351.00	FBI1 .A12	100.0	100000.0
7	Q208A	9873.00	FBI1 .A13	100.0	100000.0
8	Q208B	10127.00	FBI1 .A14	100.0	100000.0
9	Q208C	8632.00	FBI1 .A15	100.0	100000.0
10	Q209A	11542.00	FBI1 .A16	100.0	100000.0
11	Q209B	11403.00	FBI1 .A17	100.0	100000.0
12	Q209C	9651.00	FBI1 .A18	100.0	100000.0
13	Q210	7485.00	FBI1 .A19	100.0	100000.0
14	Q211	10875.00	FBI1 .A20	100.0	100000.0
15	Q212	8525.00	FBI1 .A21	100.0	100000.0
16	Q213	8987.00	FBI1 .A22	100.0	100000.0
17	Q214	9092.00	FBI1 .A23	100.0	100000.0
18	Q215A	11810.00	FBI1 .A24	100.0	100000.0
19	Q215B	9062.00	FBI1 .A25	100.0	100000.0
20	Q215C	9175.00	FBI1 .A26	100.0	100000.0
21	Q216A	10107.00	FBI1 .A27	100.0	100000.0
22	Q216B	8743.00	FBI1 .A28	100.0	100000.0
23	Q216C	8482.00	FBI1 .A29	100.0	100000.0
24	Q217A	9827.00	FBI1 .A30	100.0	100000.0
25	Q217B	9596.00	FBI1 .A31	100.0	100000.0
26	Q217C	10423.00	FBI1 .A32	100.0	100000.0
27	Q218A	9990.00	FBI1 .A33	100.0	100000.0
28	Q218B	8442.00	FBI1 .A34	100.0	100000.0
29	Q218C	9473.00	FBI1 .A35	100.0	100000.0
30	Q228A	9410.00	FBI1 .A36	100.0	100000.0
31	Q228B	9208.00	FBI1 .A37	100.0	100000.0
32	Q228C	8913.00	FBI1 .A38	100.0	100000.0
33	Q229A	5291.00	FBI1 .A39	100.0	100000.0
34	Q229B	4507.00	FBI1 .A40	100.0	100000.0
35	Q229C	8475.00	FBI1 .A41	100.0	100000.0
36	Q230A	10140.00	FBI1 .A42	100.0	100000.0
37	Q230B	7129.00	FBI1 .A43	100.0	100000.0
38	Q230C	3512.00	FBI1 .A44	100.0	100000.0
39	Q231A	8593.00	FBI1 .A45	100.0	100000.0
40	Q231B	10892.00	FBI1 .A46	100.0	100000.0
41	Q231C	7681.00	FBI1 .A47	100.0	100000.0
42	Q232A	8435.00	FBI1 .A48	100.0	100000.0
43	Q232B	9165.00	FBI1 .A49	100.0	100000.0
44	Q232C	9432.00	FBI1 .A50	100.0	100000.0
45	Q233A	12320.00	FBI1 .A51	100.0	100000.0
46	Q233B	6626.00	FBI1 .A52	100.0	100000.0
47	Q233C	9634.00	FBI1 .A53	100.0	100000.0
48	Q234A	8570.00	FBI1 .A54	100.0	100000.0
49	Q234B	5308.00	FBI1 .A55	100.0	100000.0

50	Q234C	3665.00	FBI1	. A56	100.0	100000.0
51	Q235A	8812.00	FBI1	. A57	100.0	100000.0
52	Q235B	5715.00	FBI1	. A58	100.0	100000.0
53	Q235C	6203.00	FBI1	. A59	100.0	100000.0
54	Q236A	11815.00	FBI1	. A60	100.0	100000.0
55	Q236B	9961.00	FBI1	. A61	100.0	100000.0
56	Q236C	5924.00	FBI1	. A62	100.0	100000.0
57	Q239A	8751.00	FBI1	. A63	100.0	100000.0
58	Q239B	8429.00	FBI1	. A64	100.0	100000.0
59	Q239C	8501.00	FBI1	. A65	100.0	100000.0
60	Q240A	9207.00	FBI1	. A66	100.0	100000.0
61	Q240B	10669.00	FBI1	. A67	100.0	100000.0
62	Q240C	10333.00	FBI1	. A68	100.0	100000.0
63	S626A	9497.00	FBI1	. A01	100.0	100000.0
64	S626B	9747.00	FBI1	. A02	100.0	100000.0
65	S626C	10186.00	FBI1	. A03	100.0	100000.0
66	S604A	8210.00	FBI1	. A04	100.0	100000.0
67	S604B	9534.00	FBI1	. A05	100.0	100000.0
68	S604C	9555.00	FBI1	. A06	100.0	100000.0



19 DEC 1979 8:52:01 AM

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00

SAMPLE IDENTIFICATION: 5626A

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 9497.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

ACQUISITION DATE: 19DEC79 108:45 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PM	CTS/SEC	ZERR	FIT
1	1	511.04	15338.	4675.	3.15	1022.50	1011	23	2.556E 01	1.0	2.52E 00
2	9	559.67	1995.	1040.	1.38	1119.67	1113	46	3.326E 00	3.2	5.40E 01
3	9	564.17	149968.	1414.	2.32	1128.66	1113	46	2.499E 02	0.3	
4	1	602.82	4291.	732.	2.40	1205.91	1198	16	7.152E 00	1.8	2.88E 00
5	1	639.56	190.	504.	2.90	1279.33	1272	12	3.170E-01	18.2	4.72E 00
6	1	646.01	262.	555.	2.90	1292.22	1284	15	4.371E-01	14.1	7.39E-01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	15338.	7.8000E-02	0.0000E-01	7.7314E-02	7.9199E-04
Z-ANTIMONY	564.1	149968.	7.2000E-01	0.0000E-01	4.2817E-02	1.1160E-04
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 8:53:06 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: S626B  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 9747.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 119:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.04	15183.	4744.	3.11	1022.49	1011	23	2.531E 01	1.0	1.48E 00
2	5	559.71	1749.	1046.	1.69	1119.75	1109	30	2.916E 00	3.5	5.75E 01
3	5	564.16	152944.	1134.	2.32	1128.64	1109	30	2.549E 02	0.3	
4	1	602.04	4435.	965.	2.33	1205.95	1196	20	7.392E 00	1.8	1.63E 00
5	1	646.04	262.	562.	2.46	1292.28	1287	13	4.360E-01	14.2	1.24E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	15183.	7.0000E-02	0.0000E-01	7.5283E-02	7.7881E-04
%-ANTIMONY	564.1	152944.	7.2000E-01	0.0000E-01	4.2626E-02	1.0980E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
\*\*\*\*\* 19 DEC 1979 8:54:14 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
SAMPLE IDENTIFICATION: S626C  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 10186.00 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 19DEC79 129:53 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.03	16885.	5400.	3.10	1022.47	1011	24	2.814E 01	1.0	1.96E 00
2	10	559.72	2199.	893.	1.33	1119.77	1107	39	3.665E 00	2.9	6.53E 01
3	10	564.15	163508.	1199.	2.32	1128.63	1107	39	2.725E 02	0.2	
4	1	602.80	4755.	1166.	2.29	1205.88	1195	21	7.925E 00	1.8	1.36E 00
5	1	645.87	300.	546.	2.74	1291.95	1287	12	5.006E-01	12.4	2.09E 00
6	1	657.54	197.	529.	2.50	1315.26	1307	14	3.278E-01	18.0	1.12E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	16885.	7.0000E-02	0.0000E-01	8.0883E-02	7.9703E-04
Z-ANTIMONY	564.1	163508.	7.2000E-01	0.0000E-01	4.3688E-02	1.0883E-04
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 8:55:24 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD--THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: S604A  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 8210.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 140:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 644. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-0 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.32	1180.	6803.	3.20	1023.05	1015	15	1.966E 00	10.3	1.14E 00
2	2	559.19	27895.	4121.	2.39	1118.72	1108	34	4.649E 01	0.7	7.97E 01
3	2	564.14	324814.	3517.	2.34	1128.60	1108	34	5.414E 02	0.2	
4	1	602.76	9358.	3328.	2.37	1205.80	1196	22	1.560E 01	1.4	2.58E 00
5	1	645.86	649.	1540.	2.49	1291.93	1285	14	1.082E 00	9.4	7.99E-01
6	1	657.11	2850.	1524.	2.42	1314.42	1307	16	4.751E 00	2.7	2.93E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
X-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
X-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
X-ARSENIC	657.4	2850.	1.0000E-01	0.0000E-01	8.6897E-03	2.3413E-04

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 8:56:26 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 5604B  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 9534.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 151:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 653. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	ZERR	FIT
1	1	510.76	1859.	8611.	4.03	1021.93	1013	17	3.099E 00	7.4	1.09E 00
2	3	559.18	32462.	4826.	2.40	1118.70	1107	33	5.410E 01	0.6	8.33E 01
3	3	564.13	376051.	4300.	2.34	1128.58	1107	33	6.268E 02	0.2	
4	1	602.79	10700.	3845.	2.35	1205.86	1196	20	1.783E 01	1.3	3.32E 00
5	1	646.15	820.	2145.	2.67	1292.50	1285	15	1.366E 00	8.7	2.19E 00
6	1	657.13	3073.	2380.	2.32	1314.45	1305	17	5.122E 00	2.9	1.69E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	3073.	1.0000E-01	0.0000E-01	8.1062E-03	2.3347E-04

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 8:57:28 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: S604C  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 9555.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 202:33 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 650. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-0 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.00	1312.	6516.	3.36	1022.41	1017	13	2.187E 00	9.1	8.16E-01
2	3	559.18	30614.	4641.	2.41	1118.69	1108	35	5.102E 01	0.7	8.20E 01
3	3	564.13	359029.	4012.	2.34	1128.59	1108	35	5.984E 02	0.2	
4	1	602.80	10447.	3281.	2.33	1205.87	1197	18	1.741E 01	1.2	2.68E 00
5	1	646.11	749.	2231.	2.51	1292.42	1284	17	1.248E 00	9.6	1.43E 00
6	1	657.12	3041.	2155.	2.41	1314.42	1307	17	5.069E 00	2.8	2.15E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ARSENIC	657.4	3041.	1.0000E-01	0.0000E-01	8.0444E-03	2.2677E-04

# SUMMARY OF STANDARD CONSTANTS:

## 1. ELEMENT Z-COPPER AT 511.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.8000E-02	7.7314E-02	7.9199E-04
S626B	7.8000E-02	7.5283E-02	7.7881E-04
S626C	7.8000E-02	8.0883E-02	7.9703E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	7.7785E-02	4.5562E-04

## 2. ELEMENT Z-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.2000E-01	4.2817E-02	1.1160E-04
S626B	7.2000E-01	4.2626E-02	1.0980E-04
S626C	7.2000E-01	4.3688E-02	1.0883E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	4.3050E-02	6.3544E-05

## 3. ELEMENT Z-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604A	1.0000E-01	8.6897E-03	2.3413E-04
S604B	1.0000E-01	8.1062E-03	2.3347E-04
S604C	1.0000E-01	8.0444E-03	2.2677E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	8.2747E-03	1.3359E-04

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 8:58:49 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0206A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11852.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1426:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	365.	968.	0.0022	0.0001	4.3
%-ANTIMONY	564.2	451.	8997.	0.0307	0.0003	1.1
%-ARSENIC	657.4	188.	0. <	0.0013	NOT DETECTABLE	

1009:	26.	21.	23.	19.	20.	24.	20.	39.	38.
1018:	45.	77.	116.	138.	151.	164.	141.	107.	84.
1027:	53.	34.	28.	20.	24.	19.	15.	25.	23.
1117:	29.	23.	23.	27.	34.	42.	50.	101.	314.
1126:	699.	1334.	1758.	1803.	1579.	938.	420.	109.	32.
1135:	16.	9.	10.	15.	16.	14.	14.	17.	9.
1301:	13.	16.	14.	15.	12.	13.	13.	13.	10.
1310:	15.	13.	7.	12.	17.	20.	13.	18.	19.
1319:	10.	16.	18.	13.	14.	10.	14.	12.	15.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	968.	365.	3.22	1022.53	1013	20	1.613E 00	4.3
2	1	564.19	8997.	451.	2.27	1128.70	1118	22	1.500E 01	1.1
3	1	602.84	248.	212.	2.91	1205.95	1197	16	4.139E-01	10.4



\*\*\*\*\*  
\*\*\*\*\* 19 DEC 1979 8:59:52 AM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
SAMPLE IDENTIFICATION: 0206B  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 11527.00 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 18DEC79 1436:54 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	456.	935.	0.0022	0.0001	4.6
%-ANTIMONY	564.2	360.	8954.	0.0315	0.0003	1.1
%-ARSENIC	657.4	170.	0. <	0.0012	NOT DETECTABLE	

1009:	25.	22.	21.	22.	21.	22.	30.	37.	44.
1010:	50.	70.	106.	143.	155.	156.	155.	110.	64.
1027:	62.	39.	35.	17.	28.	26.	20.	23.	14.
1117:	20.	26.	38.	36.	43.	47.	58.	110.	272.
1126:	740.	1295.	1774.	1750.	1562.	937.	410.	137.	26.
1135:	10.	14.	11.	15.	13.	13.	14.	11.	17.
1301:	13.	15.	12.	20.	17.	13.	9.	11.	20.
1310:	9.	13.	8.	11.	11.	11.	14.	14.	10.
1319:	13.	23.	13.	18.	12.	18.	9.	16.	11.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	935.	456.	3.06	1022.65	1012	24	1.559E 00	4.6
2	1	564.18	8954.	360.	2.28	1128.70	1118	20	1.492E 01	1.1
3	1	602.90	198.	204.	2.08	1206.07	1197	16	3.293E-01	12.5

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:00:56 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q206C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13738.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1447:09 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	579.	1028.	0.0021	0.0001	4.6
%-ANTIMONY	564.2	472.	10733.	0.0317	0.0003	1.0
%-ARSENIC	657.4	213.	0. <	0.0012	NOT DETECTABLE	

1009:	34.	25.	23.	18.	27.	22.	27.	36.	41.
1018:	63.	82.	113.	162.	189.	162.	179.	122.	84.
1027:	63.	46.	27.	36.	28.	20.	24.	18.	26.
1117:	23.	34.	43.	31.	43.	50.	57.	114.	335.
1126:	872.	1576.	2101.	2126.	1854.	1093.	543.	155.	33.
1135:	19.	14.	15.	5.	13.	10.	15.	16.	18.
1301:	23.	11.	17.	12.	12.	17.	20.	15.	25.
1310:	21.	16.	23.	18.	18.	15.	20.	13.	9.
1319:	10.	10.	15.	16.	19.	9.	14.	20.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	1028.	579.	2.92	1022.60	1013	26	1.714E 00	4.5
2	1	564.18	10733.	472.	2.29	1128.69	1118	23	1.789E 01	1.0
3	1	602.78	299.	185.	2.67	1205.82	1195	18	4.989E-01	8.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:02:01 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q207A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11259.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1457:24 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	1133.	913.	0.0022	0.0001	6.2
Z-ANTIMONY	564.2	1830.	30757.	0.1112	0.0007	0.6
Z-ARSENIC	657.4	253.	0. <	0.0016	NOT DETECTABLE	

1009:	51.	49.	42.	57.	57.	65.	52.	53.	66.
1018:	69.	115.	124.	161.	191.	164.	168.	153.	107.
1027:	88.	52.	59.	46.	39.	48.	46.	60.	49.
1117:	101.	119.	140.	116.	123.	133.	162.	333.	1009.
1126:	2537.	4668.	6182.	6069.	5075.	3275.	1470.	444.	81.
1135:	36.	22.	30.	24.	17.	16.	16.	20.	21.
1301:	18.	20.	16.	16.	13.	20.	16.	9.	12.
1310:	16.	14.	14.	18.	29.	23.	28.	20.	18.
1319:	25.	18.	18.	16.	22.	17.	14.	17.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.15	913.	1133.	3.30	1022.71	1015	23	1.522E 00	6.2
2	1	564.16	30757.	1830.	2.29	1128.65	1120	24	5.126E 01	0.6
3	1	602.79	789.	340.	2.15	1205.85	1199	16	1.315E 00	4.9

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:03:08 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q207B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8787.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1507:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER	511.1	965.	795.	0.0025	0.0002	6.6
X-ANTIMONY	564.2	1031.	24097.	0.1118	0.0008	0.7
X-ARSENIC	657.4	190.	0. <	0.0017	NOT DETECTABLE	

1009:	39.	34.	28.	41.	37.	47.	43.	47.	56.
1018:	73.	81.	104.	120.	149.	159.	128.	89.	92.
1027:	58.	47.	51.	54.	29.	44.	33.	44.	31.
1117:	69.	95.	82.	95.	95.	97.	147.	295.	755.
1126:	2050.	3624.	4790.	4616.	3955.	2563.	1139.	344.	63.
1135:	22.	18.	12.	14.	26.	18.	16.	21.	17.
1301:	35.	14.	18.	12.	20.	7.	14.	11.	12.
1310:	13.	14.	17.	26.	9.	16.	13.	13.	12.
1319:	12.	16.	17.	15.	15.	15.	10.	14.	17.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	795.	965.	3.12	1022.60	1011	33	1.324E 00	6.6
2	1	564.16	24097.	1031.	2.33	1128.64	1120	19	4.016E 01	0.7
3	1	602.71	628.	312.	2.36	1205.60	1197	24	1.047E 00	5.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:04:13 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q207C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9351.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1518:01 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	707.	735.	0.0022	0.0001	6.3
%-ANTIMONY	564.2	1105.	24478.	0.1069	0.0007	0.7
%-ARSENIC	657.4	190.	0. <	0.0016	NOT DETECTABLE	

1009:	43.	41.	36.	55.	29.	48.	53.	56.	52.
1018:	63.	90.	110.	115.	144.	153.	135.	119.	66.
1027:	61.	41.	46.	34.	39.	42.	41.	35.	37.
1117:	90.	87.	99.	109.	111.	101.	126.	294.	807.
1126:	2066.	3718.	4873.	4967.	4083.	2490.	1154.	348.	52.
1135:	26.	15.	17.	23.	16.	21.	14.	12.	11.
1301:	18.	16.	15.	16.	19.	16.	12.	10.	16.
1310:	13.	11.	15.	15.	15.	19.	19.	17.	10.
1319:	9.	13.	18.	7.	14.	19.	12.	10.	13.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	735.	707.	3.17	1022.65	1013	18	1.225E 00	6.3
2	1	564.16	24478.	1105.	2.27	1128.64	1121	17	4.080E 01	0.7
3	1	602.87	735.	406.	2.54	1206.02	1195	29	1.225E 00	5.4

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:05:16 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q208A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9073.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1528:19 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	857.	670.	0.0021	0.0002	7.3
%-ANTIMONY	564.2	1105.	23913.	0.1079	0.0007	0.7
%-ARSENIC	657.4	153.	0. <	0.0015	NOT DETECTABLE	

1009:	42.	44.	49.	35.	44.	44.	38.	62.	40.
1018:	52.	74.	105.	106.	142.	122.	135.	95.	87.
1027:	67.	41.	45.	33.	29.	22.	40.	34.	33.
1117:	84.	107.	95.	116.	110.	108.	134.	274.	779.
1126:	2019.	3537.	4772.	4680.	3967.	2547.	1199.	315.	53.
1135:	21.	17.	17.	17.	13.	15.	14.	13.	15.
1301:	9.	7.	11.	10.	14.	12.	14.	9.	18.
1310:	11.	10.	11.	13.	15.	16.	14.	13.	6.
1319:	9.	8.	9.	13.	19.	12.	16.	10.	19.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.15	670.	857.	3.21	1022.70	1013	23	1.117E 00	7.3
2	1	564.17	23913.	1105.	2.31	1128.67	1121	17	3.985E 01	0.7
3	1	602.78	704.	312.	2.36	1205.83	1196	24	1.174E 00	5.2

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:06:20 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q208B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10127.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1538:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	930.	904.	0.0026	0.0001	5.8
%-ANTIMONY	564.2	182.	26591.	0.1076	0.0007	0.6
%-ARSENIC	657.4	159.	0. <	0.0014	NOT DETECTABLE	

1009:	32.	44.	38.	42.	36.	44.	47.	52.	54.
1010:	73.	109.	113.	127.	152.	174.	173.	117.	87.
1027:	64.	43.	42.	51.	42.	27.	30.	27.	34.
1117:	83.	120.	124.	109.	108.	103.	146.	296.	858.
1120:	2212.	3965.	5231.	5207.	4351.	2730.	1207.	333.	68.
1135:	16.	16.	10.	9.	18.	13.	13.	17.	16.
1301:	13.	8.	14.	17.	17.	11.	6.	6.	11.
1310:	7.	14.	10.	21.	17.	11.	6.	10.	14.
1319:	12.	15.	11.	9.	10.	11.	13.	11.	9.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.13	904.	930.	3.32	1022.68	1013	24	1.507E 00	5.8
2	3	559.56	552.	375.	2.91	1119.46	1112	26	9.205E-01	6.5
3	3	564.15	26591.	182.	2.30	1128.63	1112	26	4.432E 01	0.6
4	1	602.80	697.	171.	2.34	1205.88	1196	19	1.162E 00	4.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:07:25 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0208C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8632.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1548:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	591.	638.	0.0021	0.0001	6.7
%-ANTIMONY	564.2	931.	23814.	0.1133	0.0008	0.7
%-ARSENIC	657.4	167.	0. <	0.0017	NOT DETECTABLE	

1009:	44.	54.	37.	36.	39.	39.	36.	51.	37.
1018:	54.	76.	87.	108.	124.	133.	110.	94.	84.
1027:	59.	39.	21.	43.	32.	34.	27.	22.	29.
1117:	64.	97.	72.	89.	95.	105.	132.	264.	784.
1126:	1880.	3590.	4619.	4754.	3942.	2574.	1118.	299.	60.
1135:	18.	15.	12.	15.	17.	13.	10.	17.	11.
1301:	10.	10.	7.	12.	11.	7.	13.	6.	7.
1310:	8.	15.	10.	13.	18.	13.	11.	19.	13.
1319:	18.	11.	11.	10.	7.	16.	8.	4.	7.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.17	638.	591.	3.28	1022.74	1013	17	1.064E 00	6.7
2	1	564.18	23814.	931.	2.30	1128.68	1119	19	3.969E 01	0.7
3	1	602.88	645.	390.	2.14	1206.03	1197	40	1.076E 00	5.8



\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:08:29 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q209A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11542.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1559:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	414.	798.	0.0020	0.0001	5.1
%-ANTIMONY	564.2	473.	8388.	0.0299	0.0003	1.2
%-ARSENIC	657.4	109.	0. <	0.0010	NOT DETECTABLE	
1009:	12.	10.	28.	17.	20.	22.
1010:	47.	69.	82.	120.	146.	130.
1027:	53.	37.	21.	20.	20.	10.
1117:	25.	26.	38.	26.	21.	44.
1126:	666.	1289.	1684.	1695.	1397.	879.
1135:	6.	7.	11.	7.	5.	8.
1301:	13.	8.	9.	6.	10.	7.
1310:	8.	7.	11.	6.	16.	8.
1319:	7.	9.	7.	8.	8.	9.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	798.	414.	3.17	1022.59	1014	24	1.331E 00	5.1
2	1	564.16	8388.	473.	2.26	1128.65	1120	22	1.398E 01	1.2
3	1	602.86	253.	143.	2.59	1205.99	1195	22	4.211E-01	9.2

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:09:32 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q209B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11403.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1609:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
Z-COPPER	511.1	320.	868.	0.0022	0.0001	4.5
Z-ANTIMONY	564.2	409.	8730.	0.0316	0.0004	1.1
Z-ARSENIC	657.4	110.	0. <	0.0011	NOT DETECTABLE	

1009:	19.	14.	12.	31.	13.	22.	17.	15.	36.
1018:	53.	64.	104.	124.	146.	147.	122.	114.	61.
1027:	46.	29.	23.	15.	22.	10.	15.	14.	21.
1117:	18.	36.	28.	23.	33.	44.	57.	105.	262.
1126:	711.	1285.	1660.	1726.	1463.	984.	417.	120.	26.
1135:	11.	14.	11.	11.	14.	8.	7.	5.	6.
1301:	11.	7.	11.	3.	4.	15.	12.	7.	7.
1310:	10.	7.	11.	8.	9.	6.	8.	8.	7.
1319:	11.	10.	8.	11.	11.	6.	5.	10.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	868.	320.	3.09	1022.58	1014	20	1.446E 00	4.5
2	1	564.20	8730.	409.	2.33	1128.72	1119	19	1.455E 01	1.1
3	1	602.96	296.	252.	2.88	1206.18	1200	28	4.935E-01	9.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:10:37 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q209C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9651.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1619:43 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	312.	746.	0.0023	0.0001	5.0
%-ANTIMONY	564.2	247.	7524.	0.0322	0.0004	1.2
%-ARSENIC	657.4	92.	0. <	0.0012	NOT DETECTABLE	

1009:	13.	16.	17.	12.	11.	12.	17.	22.	30.
1018:	38.	63.	92.	97.	120.	111.	122.	80.	47.
1027:	43.	14.	24.	17.	15.	12.	10.	7.	13.
1117:	15.	20.	19.	26.	23.	30.	36.	86.	254.
1126:	592.	1126.	1463.	1488.	1259.	798.	358.	104.	10.
1135:	4.	4.	4.	9.	6.	6.	7.	10.	9.
1301:	12.	7.	6.	7.	5.	3.	7.	5.	7.
1310:	5.	6.	11.	7.	7.	10.	7.	5.	6.
1319:	8.	6.	7.	6.	11.	5.	5.	8.	4.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	746.	312.	3.19	1022.47	1013	25	1.243E 00	5.0
2	1	564.18	7524.	247.	2.30	1128.68	1119	19	1.254E 01	1.2
3	1	602.81	213.	173.	2.24	1205.89	1195	30	3.549E-01	11.1

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:11:45 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0210  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7485.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1629:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	4112.	886.	0.0036	0.0004	10.8
%-ANTIMONY	564.1	1745.	141566.	0.7825	0.0024	0.3
%-ARSENIC	657.1	2590.	4813.	0.1527	0.0040	2.6

1009:	278.	231.	226.	258.	269.	235.	255.	298.	297.
1018:	294.	329.	351.	359.	405.	414.	365.	310.	312.
1027:	265.	234.	273.	251.	246.	253.	241.	248.	242.
1117:	7399.	9643.	9769.	8125.	5501.	2736.	1454.	1739.	4998.
1126:	12460.	21521.	27676.	27753.	22479.	14186.	6439.	1914.	441.
1135:	162.	160.	153.	145.	140.	125.	161.	132.	144.
1301:	58.	73.	71.	68.	65.	78.	82.	82.	101.
1310:	124.	277.	562.	855.	964.	1011.	853.	519.	233.
1319:	139.	66.	64.	66.	49.	62.	60.	56.	60.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.86	886.	4112.	2.85	1022.13	1014	16	1.477E 00	10.8
2	2	559.17	48525.	2208.	2.31	1118.68	1109	32	8.088E 01	0.5
3	2	564.13	141566.	1745.	2.33	1128.59	1109	32	2.359E 02	0.3
4	1	602.79	3749.	1284.	2.32	1205.85	1198	16	6.249E 00	2.1
5	1	646.14	356.	1118.	2.93	1292.48	1286	17	5.940E-01	14.3
6	1	657.14	4813.	2590.	2.37	1314.46	1303	28	8.022E 00	2.1
7	1	665.54	147.	668.	2.32	1331.24	1330	9	2.445E-01	26.3

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:12:54 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0211  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10875.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1640:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 638. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511. 1	6651.	1682.	0.0047	0.0003	7. 3
%-ANTIMONY	564. 1	3054.	209950.	0.0002	0.0021	0. 3
%-ARSENIC	657. 1	2090.	7885.	0.1730	0.0037	2. 1

1009:	408.	397.	382.	383.	392.	389.	404.	372.	408.
1018:	418.	477.	552.	559.	537.	590.	561.	533.	486.
1027:	438.	415.	408.	392.	377.	373.	353.	349.	345.

1117:11469.	14750.	14736.	12358.	8143.	4245.	2146.	3011.	7880.	
1126:18683.	32000.	40656.	40933.	33226.	21147.	9258.	2787.	744.	
1135:	353.	276.	237.	225.	259.	233.	233.	230.	244.

1301:	117.	125.	112.	132.	105.	110.	122.	123.	142.
1310:	225.	383.	857.	1336.	1596.	1597.	1286.	807.	432.
1319:	177.	121.	104.	90.	85.	76.	101.	107.	98.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1	1	511. 10	1682.	6651.	3. 78	1022. 60	1016	18	2. 803E 00	7. 3
2	2	559. 15	74106.	3396.	2. 32	1118. 64	1109	31	1. 235E 02	0. 4
3	2	564. 12	209950.	3054.	2. 35	1128. 58	1109	31	3. 499E 02	0. 2
4	1	602. 78	5463.	2346.	2. 30	1205. 83	1197	17	9. 105E 00	1. 8
5	1	645. 67	388.	2525.	2. 32	1291. 55	1281	20	6. 473E-01	19. 0
6	1	657. 14	7885.	2090.	2. 37	1314. 47	1303	21	1. 314E 01	1. 4
7	1	665. 37	401.	1284.	1. 99	1330. 92	1324	13	6. 680E-01	13. 6

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 \*\*\*\*\* 19 DEC 1979 9:14:04 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0212  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8525.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1651:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4786.	1301.	0.0047	0.0004	8.0
%-ANTIMONY	564.1	1845.	160709.	0.7829	0.0023	0.3
%-ARSENIC	657.1	1640.	5813.	0.1635	0.0038	2.3

1009:	287.	310.	313.	304.	329.	274.	291.	288.	311.
1010:	323.	378.	365.	443.	458.	461.	401.	369.	397.
1027:	318.	339.	323.	281.	296.	265.	282.	261.	286.

1117:	8586.	10937.	11293.	9489.	6491.	3340.	1716.	2173.	5700.
1126:	13971.	24466.	30989.	31485.	25717.	16469.	7294.	2142.	543.
1135:	219.	187.	174.	192.	160.	167.	163.	163.	184.

1301:	79.	99.	90.	80.	85.	65.	82.	87.	104.
1310:	152.	282.	662.	982.	1208.	1119.	939.	636.	292.
1319:	142.	93.	69.	66.	73.	72.	70.	82.	73.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	1301.	4786.	3.64	1022.57	1016	17	2.169E 00	8.0
2	2	559.18	56966.	2506.	2.36	1118.70	1107	34	9.494E 01	0.4
3	2	564.14	160709.	1845.	2.34	1128.60	1107	34	2.678E 02	0.3
4	1	602.74	4352.	1895.	2.41	1205.74	1195	19	7.253E 00	2.1
5	1	646.12	266.	1151.	2.16	1292.44	1286	14	4.437E-01	19.0
6	1	657.13	5813.	1640.	2.42	1314.44	1303	20	9.689E 00	1.6
7	1	665.40	321.	1036.	2.04	1330.98	1323	14	5.346E-01	15.3

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:15:12 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q213  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8987.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1702:10 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	510.9	3809.	1039.	0.0036	0.0003	9.0
%-ANTIMONY	564.1	2109.	162912.	0.7543	0.0022	0.3
%-ARSENIC	657.1	1520.	5814.	0.1558	0.0036	2.3

1009:	321.	299.	285.	303.	307.	327.	290.	302.	312.
1018:	306.	374.	405.	424.	458.	429.	408.	397.	321.
1027:	309.	293.	287.	299.	273.	267.	283.	275.	305.
1117:	8401.	10891.	11222.	9297.	6202.	3220.	1706.	2202.	5837.
1126:	14087.	24956.	31598.	31618.	25940.	16506.	7396.	2136.	539.
1135:	222.	190.	171.	160.	162.	166.	167.	182.	178.
1301:	85.	89.	87.	79.	80.	92.	86.	79.	93.
1310:	154.	337.	638.	1014.	1191.	1161.	955.	578.	302.
1319:	131.	88.	76.	96.	64.	67.	78.	73.	76.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.90	1039.	3809.	3.19	1022.22	1016	13	1.732E 00	9.0
2	2	559.17	55533.	2330.	2.32	1118.68	1108	33	9.255E 01	0.4
3	2	564.13	162912.	2109.	2.34	1128.59	1108	33	2.715E 02	0.3
4	1	602.74	4295.	2277.	2.33	1205.75	1196	22	7.158E 00	2.2
5	1	657.11	5814.	1520.	2.37	1314.42	1305	20	9.690E 00	1.6
6	1	665.27	372.	909.	2.46	1330.72	1325	12	6.199E-01	12.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:16:21 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00

SAMPLE IDENTIFICATION: Q214

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 9092.000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 18DEC79 1712:52 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932263 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3555.	657.	0.0023	0.0003	13.4
%-ANTIMONY	564.1	1773.	155214.	0.7117	0.0021	0.3
%-ARSENIC	657.2	5814.	4693.	0.1249	0.0040	3.2

1009:	301.	206.	293.	291.	307.	312.	299.	300.	287.
1010:	308.	336.	341.	396.	434.	387.	385.	377.	314.
1027:	286.	300.	298.	272.	293.	260.	278.	286.	270.

1117:	7454.	9651.	10014.	8407.	5617.	3000.	1566.	2092.	5410.
1126:	13267.	23656.	30268.	30473.	24912.	15899.	7058.	2070.	501.
1135:	208.	177.	164.	180.	151.	142.	150.	162.	147.

1301:	68.	77.	82.	75.	66.	72.	95.	70.	104.
1310:	138.	252.	540.	880.	970.	1053.	880.	557.	267.
1319:	127.	83.	63.	74.	48.	67.	55.	65.	92.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHNNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	657.	3555.	2.46	1022.45	1017	12	1.096E 00	13.4
2	2	559.18	50067.	2395.	2.35	1118.70	1107	35	8.344E 01	0.5
3	2	564.14	155214.	1773.	2.32	1128.60	1107	35	2.587E 02	0.3
4	1	602.82	4133.	1568.	2.38	1205.91	1197	17	6.888E 00	2.1
5	1	657.17	4693.	5814.	2.31	1314.53	1280	51	7.822E 00	2.7
6	1	664.91	28.	797.	8.85	1330.00	1330	9	4.694E-02	****



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 \*\*\*\*\* 19 DEC 1979 9:17:31 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q215A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11810.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1723:35 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5766.	30968.	0.0027	0.0007	0.9
%-ANTIMONY	564.1	1469.	171640.	0.6070	0.0017	0.3
%-ARSENIC	657.4	738.	0. <	0.0027	NOT DETECTABLE	

1009:	282.	291.	250.	277.	297.	354.	444.	616.	829.
1010:	1402.	2266.	3259.	4218.	4830.	4860.	4076.	3188.	2210.
1027:	1361.	769.	574.	344.	300.	245.	232.	209.	211.
1117:	469.	545.	680.	596.	643.	640.	878.	2078.	5667.
1126:	14606.	25782.	33189.	33530.	27477.	17895.	7838.	2262.	483.
1135:	182.	159.	128.	135.	116.	113.	121.	116.	101.
1301:	57.	51.	49.	44.	45.	41.	55.	47.	43.
1310:	54.	43.	51.	74.	71.	76.	64.	60.	50.
1319:	59.	44.	49.	52.	45.	37.	48.	51.	37.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	30968.	5766.	3.15	1022.47	1011	24	5.161E 01	0.7
2	9	559.64	2224.	1105.	1.39	1119.61	1111	36	3.707E 00	3.0
3	9	564.15	171640.	1469.	2.33	1128.62	1111	36	2.861E 02	0.2
4	1	602.82	4556.	1143.	2.36	1205.92	1197	17	7.593E 00	1.8
5	1	645.94	335.	754.	2.51	1292.09	1285	15	5.591E-01	12.8

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 \*\*\*\*\* 19 DEC 1979 9:18:41 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q215B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9062.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1734:13 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4734.	23669.	0.0832	0.0008	1.0
%-ANTIMONY	564.2	4964.	129892.	0.5998	0.0019	0.3
%-ARSENIC	657.4	485.	0. <	0.0028	NOT DETECTABLE	
1009: 226.	213.	221.	219.	275.	268.	335.
1010: 1017.	1734.	2527.	3257.	3658.	3524.	3056.
1027: 1025.	637.	376.	267.	233.	185.	178.
						179.
						176.
1117: 371.	430.	485.	449.	458.	537.	731.
1126:11025.	19650.	25272.	25755.	21329.	13405.	6236.
1135: 109.	85.	89.	80.	92.	80.	73.
						60.
						69.
1301: 34.	39.	33.	27.	26.	37.	33.
1310: 32.	31.	33.	54.	43.	50.	42.
1319: 37.	32.	33.	26.	26.	32.	37.
						21.
						32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	23669.	4734.	3.24	1022.43	1011	24	3.945E 01	0.8
2	1	564.16	129892.	4964.	2.31	1128.64	1120	18	2.165E 02	0.3
3	1	602.79	3592.	793.	2.45	1205.84	1197	19	5.987E 00	2.0
4	1	645.89	231.	570.	2.50	1291.98	1286	14	3.852E-01	16.0

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:19:53 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q215C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9175.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1744:43 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4963.	24450.	0.0857	0.0008	1.0
%-ANTIMONY	564.2	1174.	135956.	0.6212	0.0019	0.3
%-ARSENIC	657.4	547.	0. <	0.0030	NOT DETECTABLE	

1009:	213.	235.	221.	246.	279.	280.	318.	477.	693.
1010:	1118.	1804.	2552.	3262.	3735.	3742.	3297.	2555.	1760.
1027:	1097.	683.	403.	314.	223.	192.	182.	159.	159.
1117:	359.	490.	496.	501.	465.	557.	779.	1612.	4495.
1126:	11415.	20386.	26049.	26529.	21829.	14273.	6339.	1830.	392.
1135:	104.	88.	82.	114.	69.	79.	91.	56.	65.
1301:	34.	40.	40.	27.	38.	33.	40.	32.	31.
1310:	35.	37.	42.	52.	60.	49.	60.	41.	35.
1319:	43.	33.	29.	42.	24.	36.	34.	33.	38.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	24450.	4963.	3.21	1022.51	1011.	25	4.075E 01	0.8
2	9	559.68	2156.	805.	1.36	1119.70	1110	28	3.593E 00	2.0
3	9	564.15	135956.	1174.	2.34	1128.64	1110	28	2.266E 02	0.3
4	1	602.79	3590.	792.	2.38	1205.86	1196	18	5.983E 00	2.0
5	1	645.92	265.	711.	2.56	1292.05	1285	18	4.415E-01	15.5

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 \*\*\*\*\* 19 DEC 1979 9:21:03 AM \*\*\*\*\*  
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91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0216A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10107.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1755:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	6130.	24860.	0.0798	0.0008	1.0
Z-ANTIMONY	564.2	4660.	133697.	0.5556	0.0018	0.3
Z-ARSENIC	657.4	473.	0. <	0.0025	NOT DETECTABLE	

1009:	222.	230.	241.	224.	240.	313.	349.	470.	715.
1018:	1107.	1740.	2605.	3392.	3848.	3875.	3448.	2671.	1772.
1027:	1049.	695.	418.	281.	228.	190.	178.	180.	169.
1117:	338.	387.	384.	401.	426.	514.	664.	1535.	4518.
1126:	11362.	19932.	26034.	26613.	21938.	13847.	6258.	1830.	402.
1135:	110.	108.	75.	88.	73.	74.	74.	66.	69.
1301:	48.	40.	32.	42.	27.	35.	28.	32.	37.
1310:	31.	42.	25.	35.	43.	35.	47.	28.	45.
1319:	44.	32.	29.	28.	38.	31.	38.	37.	33.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	24860.	6130.	3.13	1022.54	1011	31.	4.143E 01	0.8
2	1	564.16	133697.	4660.	2.31	1128.64	1119	20	2.228E 02	0.3
3	1	602.77	3550.	1339.	2.34	1205.81	1195	21	5.916E 00	2.2
4	1	645.71	296.	511.	3.04	1291.62	1285	14	4.937E-01	12.3

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:22:10 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q216B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8743.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1805:48 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4937.	21270.	0.0797	0.0008	1.0
%-ANTIMONY	564.2	4235.	114505.	0.5511	0.0019	0.3
%-ARSENIC	657.4	384.	0. <	0.0027	NOT DETECTABLE	

1009:	183.	204.	203.	232.	224.	255.	296.	373.	584.
1010:	956.	1582.	2155.	2841.	3364.	3290.	2867.	2247.	1552.
1027:	941.	565.	305.	236.	198.	171.	170.	158.	144.
1117:	298.	323.	340.	327.	379.	438.	595.	1242.	3803.
1126:	9543.	17277.	22344.	22462.	18737.	11920.	5508.	1612.	335.
1135:	87.	91.	69.	68.	57.	44.	63.	50.	53.
1301:	29.	32.	38.	33.	30.	38.	30.	26.	26.
1310:	33.	28.	30.	30.	41.	35.	27.	31.	22.
1319:	28.	28.	25.	19.	33.	19.	31.	23.	20.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	21270.	4937.	3.17	1022.52	1011	29	3.545E 01	0.8
2	1	564.16	114505.	4235.	2.32	1128.64	1119	22	1.908E 02	0.3
3	1	602.81	3042.	840.	2.32	1205.89	1198	21	5.070E 00	2.3
4	1	646.12	237.	341.	2.61	1292.45	1285	13	3.954E-01	12.8

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 \*\*\*\*\* 19 DEC 1979 9:23:16 AM \*\*\*\*\*  
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91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q216C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8482.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1816:19 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4672.	19705.	0.0769	0.0008	1.0
%-ANTIMONY	564.2	3596.	106301.	0.5283	0.0018	0.3
%-ARSENIC	657.4	377.	0. <	0.0027	NOT DETECTABLE	

1009:	175.	172.	178.	187.	185.	232.	283.	400.	553.
1018:	950.	1477.	1991.	2717.	3094.	2985.	2699.	2052.	1365.
1027:	867.	530.	284.	236.	176.	167.	134.	124.	141.
1117:	283.	287.	325.	349.	374.	395.	565.	1195.	3606.
1126:	8770.	15883.	20954.	21110.	17100.	11164.	5040.	1528.	292.
1135:	102.	71.	54.	60.	55.	49.	48.	46.	52.
1301:	29.	29.	22.	21.	36.	25.	22.	30.	20.
1310:	33.	26.	30.	25.	37.	32.	31.	42.	24.
1319:	25.	26.	26.	29.	27.	30.	20.	34.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	19705.	4672.	3.15	1022.48	1011	32	3.284E 01	0.9
2	1	564.16	106301.	3596.	2.31	1128.64	1118	21	1.772E 02	0.3
3	1	602.81	2926.	618.	2.31	1205.89	1197	19	4.876E 00	2.2

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:24:20 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q217A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9827.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1026:49 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4793.	16406.	0.0558	0.0006	1.1
%-ANTIMONY	564.2	5399.	166727.	0.7166	0.0021	0.3
%-ARSENIC	657.4	566.	0. <	0.0029	NOT DETECTABLE	

1009:	283.	263.	249.	252.	282.	246.	327.	420.	567.
1018:	853.	1322.	1794.	2379.	2662.	2602.	2292.	1727.	1290.
1027:	844.	553.	365.	279.	228.	201.	211.	231.	220.
1117:	370.	380.	435.	409.	484.	629.	855.	1939.	5546.
1126:14001.	25196.	32333.	32540.	26926.	17395.	7827.	2379.	497.	
1135:	161.	125.	139.	113.	92.	95.	94.	108.	100.
1301:	61.	39.	56.	38.	44.	46.	43.	36.	39.
1310:	42.	47.	53.	40.	52.	46.	39.	43.	43.
1319:	44.	49.	29.	41.	41.	34.	47.	45.	36.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	16406.	4793.	3.17	1022.45	1012	21	2.734E 01	1.0
2	1	564.15	166727.	5399.	2.33	1128.63	1118	23	2.779E 02	0.3
3	1	602.79	4729.	1017.	2.44	1205.85	1197	18	7.881E 00	1.7
4	1	645.95	181.	1249.	1.88	1292.10	1281	19	3.020E-01	28.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:25:27 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0217B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9596.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1037:24 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	5106.	15607.	0.0548	0.0006	1.2
%-ANTIMONY	564.2	4300.	156083.	0.6883	0.0021	0.3
%-ARSENIC	657.4	489.	0. <	0.0028	NOT DETECTABLE	

1009:	215.	218.	217.	224.	266.	263.	327.	367.	489.
1018:	759.	1175.	1781.	2238.	2416.	2454.	2280.	1649.	1174.
1027:	717.	492.	323.	305.	230.	215.	188.	173.	205.
1117:	307.	319.	404.	453.	495.	603.	861.	1778.	5147.
1126:13039.	23215.	30243.	30828.	25312.	16312.	7437.	2182.	512.	
1135:	147.	114.	110.	84.	109.	85.	79.	82.	75.
1301:	37.	34.	44.	38.	44.	40.	39.	39.	42.
1310:	43.	42.	38.	35.	44.	35.	39.	36.	35.
1319:	35.	29.	36.	30.	37.	34.	26.	44.	41.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	15607.	5106.	3.17	1022.47	1011	25	2.601E 01	1.0
2	1	564.16	156083.	4300.	2.32	1128.65	1118	21	2.601E 02	0.3
3	1	602.79	4229.	1016.	2.32	1205.85	1197	17	7.048E 00	1.9
4	1	646.14	384.	680.	2.75	1292.48	1284	18	6.400E-01	10.9



\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:26:37 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0217C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10423.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1847:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	5931.	16566.	0.0541	0.0006	1.2
%-ANTIMONY	564.2	5093.	175118.	0.7123	0.0020	0.3
%-ARSENIC	657.4	575.	0. <	0.0028	NOT DETECTABLE	

1009:	263.	261.	268.	257.	294.	294.	319.	386.	593.
1018:	879.	1277.	1850.	2350.	2786.	2736.	2311.	1908.	1265.
1027:	863.	505.	361.	286.	229.	212.	216.	208.	227.
1117:	349.	376.	438.	472.	535.	612.	944.	1988.	5836.
1126:	14729.	26351.	33731.	34293.	28449.	18202.	8302.	2474.	558.
1135:	183.	141.	129.	108.	137.	89.	107.	91.	102.
1301:	53.	44.	45.	41.	46.	44.	45.	52.	39.
1310:	47.	45.	34.	54.	47.	44.	52.	39.	39.
1319:	41.	48.	46.	33.	48.	38.	51.	48.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	16566.	5931.	3.08	1022.51	1012	25	2.761E 01	1.0
2	1	564.15	175118.	5093.	2.33	1128.64	1118	21	2.919E 02	0.2
3	1	602.84	4720.	1305.	2.39	1205.95	1196	20	7.867E 00	1.8
4	1	646.03	349.	709.	2.82	1292.26	1284	15	5.812E-01	12.1

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:27:43 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RP LEAD--THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q218A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9990.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1858:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	997.	743.	0.0026	0.0002	7.1
Z-ANTIMONY	564.2	2081.	30648.	0.1303	0.0008	0.6
Z-ARSENIC	657.4	170.	0. <	0.0016	NOT DETECTABLE	

1009:	42.	46.	63.	58.	44.	39.	47.	44.	58.
1018:	89.	119.	112.	123.	153.	152.	139.	96.	82.
1027:	69.	60.	49.	39.	41.	33.	36.	32.	35.
1117:	113.	126.	115.	137.	105.	126.	172.	344.	976.
1126:	2490.	4573.	6005.	6001.	5122.	3401.	1511.	468.	81.
1135:	22.	21.	11.	26.	12.	11.	17.	8.	15.
1301:	7.	10.	12.	14.	12.	12.	7.	10.	11.
1310:	11.	19.	11.	8.	20.	14.	15.	13.	15.
1319:	8.	12.	13.	7.	8.	10.	6.	9.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.91	743.	997.	3.42	1022.23	1012	21	1.239E 00	7.0
2	1	564.18	30648.	2081.	2.32	1128.69	1120	29	5.108E 01	0.6
3	1	602.77	890.	315.	2.29	1205.81	1195	20	1.483E 00	4.4
4	1	646.02	85.	149.	2.62	1292.25	1288	11	1.414E-01	23.0

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:28:47 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q218B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8442.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1908:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	714.	692.	0.0028	0.0002	6.7
%-ANTIMONY	564.2	1021.	24144.	0.1217	0.0006	0.7
%-ARSENIC	657.4	123.	0. <	0.0016	NOT DETECTABLE	

1009:	39.	34.	34.	20.	34.	33.	26.	39.	35.
1018:	58.	75.	109.	125.	104.	132.	104.	91.	81.
1027:	51.	41.	50.	34.	35.	29.	42.	40.	31.
1117:	68.	84.	93.	94.	116.	100.	132.	254.	743.
1126:	1946.	3580.	4734.	4772.	3984.	2616.	1234.	360.	62.
1135:	12.	6.	10.	12.	16.	10.	18.	8.	14.
1301:	12.	6.	8.	8.	8.	10.	7.	7.	9.
1310:	9.	6.	5.	14.	7.	15.	16.	11.	10.
1319:	7.	4.	10.	7.	4.	6.	9.	9.	10.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.87	692.	714.	3.55	1022.15	1013	21	1.153E 00	6.7
2	1	564.18	24144.	1021.	2.32	1128.69	1120	19	4.024E 01	0.7
3	1	602.85	634.	179.	2.32	1205.96	1197	17	1.057E 00	5.0

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:29:49 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q218C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9473.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1919:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	840.	671.	0.0025	0.0002	7.2
%-ANTIMONY	564.2	1173.	28036.	0.1262	0.0008	0.6
%-ARSENIC	657.4	147.	0. <	0.0016	NOT DETECTABLE	

1009:	34.	40.	42.	39.	37.	52.	51.	45.	60.
1018:	70.	92.	100.	121.	145.	131.	117.	114.	78.
1027:	57.	46.	36.	40.	46.	38.	40.	47.	44.
1117:	96.	109.	106.	131.	113.	134.	163.	301.	886.
1126:	2233.	4184.	5621.	5596.	4673.	2990.	1394.	365.	95.
1135:	18.	17.	17.	15.	18.	12.	19.	12.	16.
1301:	15.	9.	11.	11.	10.	17.	18.	7.	14.
1310:	5.	8.	13.	15.	13.	13.	15.	9.	10.
1319:	7.	11.	14.	9.	9.	10.	7.	7.	16.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	671.	840.	3.34	1022.44	1011	20	1.119E 00	7.2
2	1	564.18	28036.	1173.	2.28	1128.68	1121	17	4.673E 01	0.6
3	1	602.78	781.	200.	2.33	1205.03	1197	16	1.302E 00	4.4

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:30:50 AM \*\*\*\*\*  
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91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0220A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9410.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1929:32 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	364.	635.	0.0024	0.0001	5.8
Z-ANTIMONY	564.2	214.	6905.	0.0313	0.0004	1.2
Z-ARSENIC	657.4	62.	0. <	0.0011	NOT DETECTABLE	

1009:	10.	14.	15.	18.	14.	8.	16.	27.	24.
1018:	27.	51.	74.	96.	78.	110.	85.	82.	52.
1027:	31.	13.	9.	14.	10.	12.	13.	12.	4.
1117:	21.	19.	14.	21.	19.	28.	45.	77.	227.
1126:	549.	1013.	1328.	1397.	1191.	670.	373.	91.	14.
1135:	8.	7.	5.	7.	6.	5.	4.	7.	7.
1301:	7.	6.	4.	2.	4.	5.	5.	5.	7.
1310:	4.	8.	6.	3.	2.	8.	8.	5.	0.
1319:	2.	4.	5.	6.	8.	6.	4.	4.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	635.	364.	3.31	1022.60	1014	28	1.058E 00	5.8
2	1	564.19	6905.	214.	2.29	1128.70	1119	19	1.151E 01	1.2
3	1	602.56	192.	154.	2.73	1205.39	1199	22	3.205E-01	11.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:31:55 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0228B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9208.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1939:47 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	310.	560.	0.0022	0.0001	6.2
%-ANTIMONY	564.2	672.	6557.	0.0305	0.0004	1.4
%-ARSENIC	657.4	95.	0. <	0.0013	NOT DETECTABLE	

1009:	18.	12.	17.	10.	15.	13.	13.	26.	30.
1018:	24.	46.	77.	101.	98.	109.	77.	65.	48.
1027:	30.	29.	19.	14.	14.	16.	13.	16.	10.
1117:	22.	15.	16.	29.	15.	35.	33.	75.	210.
1126:	496.	971.	1331.	1240.	1110.	709.	347.	81.	20.
1135:	12.	4.	6.	9.	6.	6.	6.	8.	9.
1301:	12.	8.	6.	6.	11.	7.	8.	6.	4.
1310:	8.	6.	7.	12.	6.	6.	8.	14.	7.
1319:	5.	8.	4.	7.	9.	8.	8.	5.	3.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.94	560.	310.	2.86	1022.29	1011	21	9.328E-01	6.1
2	1	564.18	6557.	672.	2.31	1128.69	1118	48	1.093E 01	1.4
3	1	602.55	205.	157.	2.48	1205.37	1197	17	3.419E-01	11.1

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:33:00 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0228C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8913.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 1950:01 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL 1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	325.	551.	0.0022	0.0001	6.3
%-ANTIMONY	564.2	290.	6412.	0.0308	0.0004	1.3
%-ARSENIC	657.4	102.	0. <	0.0014	NOT DETECTABLE	

1009:	17.	14.	15.	19.	21.	12.	16.	29.	28.
1018:	40.	52.	69.	73.	93.	87.	73.	64.	59.
1027:	41.	30.	19.	7.	10.	12.	15.	17.	11.
1117:	20.	15.	15.	25.	23.	32.	45.	83.	204.
1126:	522.	987.	1197.	1280.	1088.	651.	328.	94.	22.
1135:	11.	5.	10.	13.	7.	7.	11.	7.	12.
1301:	8.	8.	7.	8.	4.	2.	14.	8.	13.
1310:	6.	10.	5.	13.	9.	7.	12.	5.	7.
1319:	6.	3.	6.	5.	6.	6.	2.	12.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	551.	325.	3.67	1022.53	1014	20	9.180E-01	6.3
2	1	564.17	6412.	290.	2.32	1128.67	1118	20	1.069E 01	1.3
3	1	603.12	227.	216.	2.35	1206.50	1197	32	3.783E-01	11.3

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:34:04 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0229A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5291.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2000:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	750.	487.	0.0033	0.0003	9.2
%-ANTIMONY	564.2	2027.	15757.	0.1279	0.0012	0.9
%-ARSENIC	657.4	126.	0. <	0.0027	NOT DETECTABLE	

1009:	31.	34.	26.	37.	27.	19.	21.	23.	32.
1018:	41.	59.	75.	79.	109.	109.	93.	69.	68.
1027:	50.	35.	36.	29.	33.	22.	18.	22.	27.
1117:	52.	65.	73.	75.	58.	68.	81.	188.	518.
1126:	1288.	2313.	3093.	3139.	2688.	1719.	853.	233.	43.
1135:	24.	10.	10.	7.	12.	5.	14.	7.	11.
1301:	11.	14.	14.	9.	7.	10.	10.	9.	3.
1310:	14.	7.	11.	16.	10.	9.	8.	12.	13.
1319:	8.	10.	5.	16.	13.	6.	12.	11.	10.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.14	487.	750.	3.04	1022.68	1011	25	8.118E-01	9.2
2	1	564.19	15757.	2027.	2.32	1128.71	1121	51	2.626E 01	0.9
3	1	602.89	505.	278.	2.73	1206.04	1196	30	8.424E-01	6.4



\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:35:06 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0229B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 4507.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2010:30 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.5	428.	409.	0.0033	0.0003	8.7
Z-ANTIMONY	564.2	1536.	13195.	0.1259	0.0012	1.0
Z-ARSENIC	657.4	142.	0. <	0.0034	NOT DETECTABLE	

1009:	19.	27.	18.	26.	31.	28.	25.	30.	31.
1018:	36.	49.	53.	55.	74.	70.	75.	81.	47.
1027:	33.	31.	22.	28.	17.	22.	20.	32.	21.
1117:	53.	55.	47.	54.	51.	55.	66.	130.	413.
1126:	1085.	1998.	2582.	2572.	2172.	1428.	711.	170.	41.
1135:	12.	15.	14.	19.	15.	7.	13.	17.	12.
1301:	17.	12.	12.	7.	9.	13.	11.	8.	15.
1310:	9.	6.	13.	12.	15.	9.	9.	12.	13.
1319:	14.	4.	11.	7.	8.	13.	12.	11.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1	1	511.54	409.	428.	3.63	1023.44	1015	18	6.821E-01	8.7
2	1	564.17	13195.	1536.	2.34	1128.67	1119	48	2.199E 01	1.0
3	1	602.93	398.	260.	2.51	1206.12	1197	20	6.638E-01	7.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:36:08 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0229C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8475.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2020:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.2	814.	660.	0.0029	0.0002	7.3
%-ANTIMONY	564.2	1067.	25351.	0.1289	0.0009	0.7
%-ARSENIC	657.4	154.	0. <	0.0019	NOT DETECTABLE	

1009:	45.	45.	44.	33.	39.	30.	38.	39.	43.
1018:	53.	75.	100.	117.	118.	129.	128.	90.	88.
1027:	58.	45.	39.	42.	34.	34.	25.	36.	36.
1117:	71.	96.	103.	94.	112.	104.	134.	318.	828.
1126:	2076.	3767.	4866.	5120.	4309.	2654.	1243.	400.	58.
1135:	23.	11.	24.	16.	10.	16.	16.	10.	4.
1301:	11.	8.	13.	13.	7.	8.	15.	10.	7.
1310:	12.	10.	13.	10.	14.	10.	13.	12.	17.
1319:	11.	16.	9.	15.	9.	9.	13.	8.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.17	660.	814.	3.34	1022.75	1011	22	1.100E 00	7.2
2	1	564.18	25351.	1067.	2.30	1128.69	1120	18	4.225E 01	0.7
3	1	602.86	647.	179.	2.08	1205.98	1200	14	1.078E 00	4.9

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:37:13 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0230R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10140.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2031:03 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	582.	691.	0.0025	0.0002	6.3
Z-ANTIMONY	564.2	1229.	26602.	0.1133	0.0007	0.7
Z-ARSENIC	657.4	145.	0. <	0.00015	NOT DETECTABLE	

1009:	39.	33.	44.	41.	40.	30.	53.	43.	42.
1018:	68.	81.	98.	111.	127.	123.	120.	105.	60.
1027:	64.	44.	34.	31.	36.	33.	39.	42.	35.
1117:	85.	102.	109.	98.	100.	115.	156.	296.	844.
1126:	2225.	3976.	5184.	5372.	4369.	2778.	1357.	378.	63.
1135:	23.	11.	17.	9.	14.	8.	19.	10.	12.
1301:	7.	14.	8.	8.	16.	5.	11.	9.	8.
1310:	11.	17.	13.	9.	9.	16.	9.	13.	7.
1319:	13.	11.	9.	14.	14.	8.	12.	11.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	691.	582.	3.52	1022.52	1014	17	1.151E 00	6.2
2	1	564.17	26602.	1229.	2.30	1128.67	1120	21	4.434E 01	0.6
3	1	602.86	712.	377.	2.06	1205.98	1196	26	1.187E 00	5.4

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:38:16 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0230B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7129.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2041:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	563.	378.	0.0020	0.0002	10.3
%-ANTIMONY	564.2	741.	18006.	0.1092	0.0009	0.8
%-ARSENIC	657.4	110.	0. <	0.0019	NOT DETECTABLE	

1009:	33.	34.	22.	31.	40.	32.	21.	36.	35.
1018:	51.	58.	70.	76.	96.	71.	70.	50.	59.
1027:	42.	30.	35.	30.	25.	28.	26.	25.	23.
1117:	60.	69.	60.	83.	64.	79.	103.	193.	574.
1126:	1431.	2688.	3546.	3534.	3025.	1942.	852.	261.	55.
1135:	17.	12.	18.	9.	12.	15.	11.	9.	12.
1301:	8.	11.	5.	6.	8.	8.	9.	9.	9.
1310:	3.	10.	8.	11.	11.	8.	11.	8.	11.
1319:	7.	6.	7.	3.	11.	8.	6.	6.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.93	378.	563.	3.35	1022.28	1014	18	6.292E-01	10.3
2	1	564.18	18006.	741.	2.30	1128.68	1119	19	3.001E 01	0.8
3	1	602.87	523.	160.	2.34	1206.02	1198	16	8.709E-01	5.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:39:21 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RP LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q230C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 3512.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2051:36 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	360.	242.	0.0026	0.0003	12.8
%-ANTIMONY	564.2	419.	8708.	0.1074	0.0012	1.1
%-ARSENIC	657.4	83.	0. <	0.0034	NOT DETECTABLE	

1009:	20.	17.	21.	23.	23.	19.	15.	18.	19.
1018:	24.	37.	36.	51.	57.	49.	39.	47.	29.
1027:	30.	25.	15.	18.	16.	19.	20.	16.	15.
1117:	29.	32.	44.	39.	37.	36.	49.	98.	285.
1126:	751.	1276.	1755.	1738.	1429.	942.	393.	123.	26.
1135:	10.	5.	6.	7.	10.	6.	11.	4.	10.
1301:	6.	4.	7.	3.	7.	10.	3.	10.	7.
1310:	2.	5.	5.	7.	3.	11.	10.	12.	5.
1319:	5.	5.	6.	9.	5.	4.	8.	6.	12.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	242.	360.	3.40	1022.57	1013	18	4.029E-01	12.8
2	1	564.16	8708.	419.	2.29	1128.65	1121	18	1.451E 01	1.1
3	1	602.89	276.	68.	2.58	1206.04	1197	16	4.595E-01	7.4

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:40:28 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0231A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8593.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2101:51 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	685.	656.	0.0029	0.0002	6.9
Z-ANTIMONY	564.2	1208.	26740.	0.1351	0.0009	0.7
Z-ARSENIC	657.4	115.	0. <	0.0016	NOT DETECTABLE	

1009:	36.	29.	43.	31.	32.	56.	46.	46.	52.
1018:	54.	63.	113.	101.	131.	112.	104.	89.	82.
1027:	71.	41.	34.	35.	30.	43.	42.	30.	30.
1117:	77.	107.	99.	101.	115.	123.	137.	281.	848.
1126:	2163.	3982.	5248.	5284.	4337.	2950.	1335.	406.	78.
1135:	24.	17.	16.	15.	8.	14.	16.	19.	14.
1301:	5.	11.	10.	8.	12.	7.	9.	11.	6.
1310:	7.	6.	5.	17.	13.	8.	8.	10.	9.
1319:	8.	8.	10.	5.	7.	8.	9.	10.	11.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.96	656.	685.	3.51	1022.34	1011	20	1.093E 00	6.9
2	1	564.18	26740.	1208.	2.32	1128.68	1120	21	4.457E 01	0.6
3	1	602.83	753.	212.	2.49	1205.94	1196	18	1.255E 00	4.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:41:31 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q231B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10892.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2112:09 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	650.	787.	0.0028	0.0002	5.8
%-ANTIMONY	564.2	1249.	32024.	0.1279	0.0008	0.6
%-ARSENIC	657.4	147.	0. <	0.0015	NOT DETECTABLE	

1009:	59.	41.	32.	46.	45.	60.	46.	32.	57.
1018:	57.	86.	120.	148.	154.	165.	123.	114.	87.
1027:	73.	48.	57.	43.	46.	34.	41.	32.	48.
1117:	98.	116.	103.	125.	130.	109.	154.	344.	1001.
1126:	2637.	4796.	6283.	6361.	5332.	3363.	1545.	493.	67.
1135:	25.	17.	12.	20.	15.	11.	18.	16.	11.
1301:	7.	11.	8.	13.	8.	8.	8.	10.	10.
1310:	10.	7.	13.	18.	13.	8.	11.	17.	10.
1319:	11.	13.	6.	6.	7.	9.	11.	8.	9.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	787.	650.	3.04	1022.38	1016	17	1.311E 00	5.8
2	1	564.17	32024.	1249.	2.30	1128.67	1120	19	5.337E 01	0.6
3	1	602.83	929.	377.	2.47	1205.94	1197	26	1.549E 00	4.4

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:42:35 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q231C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7681.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2122:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LTB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	635.	519.	0.0026	0.0002	8.2
%-ANTIMONY	564.2	846.	22728.	0.1289	0.0009	0.7
%-ARSENIC	657.4	117.	0. <	0.0019	NOT DETECTABLE	

1009:	19.	38.	21.	31.	32.	31.	32.	35.	39.
1018:	50.	58.	79.	104.	106.	108.	94.	90.	64.
1027:	56.	29.	38.	28.	23.	35.	29.	31.	24.
1117:	68.	79.	73.	102.	79.	107.	134.	252.	745.
1126:	1832.	3358.	4420.	4544.	3808.	2396.	1121.	305.	65.
1135:	14.	13.	11.	15.	9.	12.	15.	11.	9.
1301:	10.	9.	10.	6.	7.	6.	5.	9.	6.
1310:	12.	8.	7.	7.	11.	10.	18.	9.	12.
1319:	4.	7.	6.	3.	4.	8.	6.	7.	12.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	519.	635.	3.12	1022.60	1013	20	8.651E-01	8.1
2	1	564.18	22728.	846.	2.30	1128.69	1119	19	3.788E 01	0.7
3	1	602.78	671.	203.	2.45	1205.82	1199	28	1.118E 00	4.9



\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:43:41 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0232A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8435.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2132:46 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	198.	440.	0.0021	0.0001	6.6
%-ANTIMONY	564.2	228.	5711.	0.0296	0.0004	1.4
%-ARSENIC	657.4	59.	0. <	0.0012	NOT DETECTABLE	

1009:	9.	13.	9.	15.	10.	6.	14.	19.	19.
1018:	28.	44.	56.	55.	81.	60.	60.	49.	42.
1027:	28.	20.	20.	6.	14.	14.	11.	19.	9.
1117:	13.	19.	16.	16.	19.	22.	25.	58.	163.
1126:	436.	821.	1184.	1106.	921.	658.	272.	93.	26.
1135:	7.	5.	1.	8.	8.	7.	10.	5.	4.
1301:	4.	1.	7.	4.	9.	9.	6.	3.	6.
1310:	6.	6.	3.	4.	8.	3.	1.	5.	3.
1319:	3.	5.	6.	4.	7.	6.	7.	4.	5.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.92	440.	198.	3.46	1022.25	1014	18	7.332E-01	6.6
2	1	564.19	5711.	228.	2.29	1128.70	1120	19	9.518E 00	1.4
3	1	602.73	200.	94.	3.11	1205.73	1199	15	3.328E-01	9.9

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:44:46 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q232B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9165.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2143:01 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	294.	377.	0.0016	0.0001	8.3
%-ANTIMONY	564.2	406.	6068.	0.0289	0.0004	1.4
%-ARSENIC	657.4	59.	0. <	0.0011	NOT DETECTABLE	

1009:	11.	9.	12.	9.	19.	11.	11.	23.	20.
1018:	23.	32.	49.	65.	73.	68.	78.	45.	38.
1027:	26.	15.	19.	12.	12.	13.	6.	9.	17.
1117:	17.	15.	24.	18.	21.	22.	38.	67.	199.
1126:	491.	938.	1120.	1205.	1067.	603.	315.	78.	16.
1135:	6.	7.	3.	7.	3.	4.	7.	3.	5.
1301:	4.	6.	3.	4.	1.	5.	10.	2.	7.
1310:	1.	1.	4.	6.	3.	5.	4.	7.	5.
1319:	7.	6.	3.	0.	9.	2.	5.	1.	5.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.15	377.	294.	2.82	1022.71	1014	21	6.275E-01	8.2
2	1	564.18	6068.	406.	2.32	1128.69	1120	29	1.011E 01	1.4
3	1	602.88	185.	100.	2.44	1206.02	1199	20	3.090E-01	10.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:45:53 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0232C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9432.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2153:15 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	375.	417.	0.0018	0.0001	8.2
%-ANTIMONY	564.2	235.	6624.	0.0308	0.0004	1.3
%-ARSENIC	657.4	66.	0. <	0.0012	NOT DETECTABLE	

1009:	12.	5.	10.	9.	23.	15.	19.	21.	21.
1010:	38.	49.	47.	75.	72.	94.	73.	61.	41.
1027:	32.	29.	15.	16.	10.	12.	18.	19.	10.
1117:	20.	10.	11.	24.	20.	32.	32.	87.	181.
1126:	512.	1002.	1203.	1322.	1072.	754.	335.	79.	32.
1135:	3.	2.	9.	8.	4.	7.	6.	9.	7.
1301:	3.	7.	0.	3.	2.	6.	3.	4.	5.
1310:	4.	6.	5.	4.	8.	3.	5.	5.	5.
1319:	5.	5.	6.	5.	1.	0.	1.	7.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	417.	375.	2.94	1022.58	1014	20	6.947E-01	8.2
2	1	564.20	6624.	235.	2.36	1128.72	1118	20	1.104E 01	1.3
3	1	602.70	206.	60.	2.60	1205.67	1198	16	3.428E-01	8.8

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:46:56 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0233A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12320.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2203:30 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	305.	686.	0.0023	0.0001	5.3
Z-ANTIMONY	564.2	253.	8165.	0.0291	0.0003	1.1
Z-ARSENIC	657.4	68.	0.	< 9.1618E-04	NOT DETECTABLE	

1009:	19.	12.	13.	10.	18.	21.	17.	18.	27.
1018:	38.	54.	82.	109.	120.	113.	98.	85.	49.
1027:	31.	35.	17.	9.	11.	19.	12.	16.	10.
1117:	15.	13.	27.	23.	32.	44.	24.	89.	201.
1126:	630.	1172.	1614.	1655.	1351.	839.	441.	118.	23.
1135:	11.	5.	12.	3.	10.	5.	11.	9.	6.
1301:	9.	7.	4.	11.	4.	7.	8.	5.	7.
1310:	5.	6.	6.	4.	5.	3.	6.	5.	2.
1319:	9.	6.	4.	6.	4.	3.	2.	5.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	686.	305.	3.03	1022.41	1011	23	1.144E 00	5.2
2	1	564.19	8165.	253.	2.29	1128.70	1118	23	1.361E 01	1.1
3	1	602.74	254.	169.	2.41	1205.76	1196	25	4.240E-01	9.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:48:02 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q233B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6626.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2213:44 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	233.	410.	0.0025	0.0002	7.2
%-ANTIMONY	564.2	105.	4506.	0.0299	0.0005	1.5
%-ARSENIC	657.4	55.	0. <	0.0016	NOT DETECTABLE	

1009:	4.	16.	16.	16.	14.	8.	21.	12.	21.
1018:	23.	40.	47.	48.	67.	45.	64.	56.	36.
1027:	24.	13.	10.	12.	8.	11.	10.	4.	7.
1117:	5.	9.	16.	16.	20.	18.	25.	44.	140.
1126:	342.	684.	851.	944.	724.	463.	234.	69.	14.
1135:	3.	2.	5.	2.	4.	6.	7.	4.	3.
1301:	3.	4.	5.	7.	4.	9.	6.	4.	3.
1310:	3.	5.	6.	3.	0.	7.	6.	6.	4.
1319:	3.	3.	6.	1.	1.	5.	4.	4.	2.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.24	410.	233.	3.83	1022.89	1013	19	6.830E-01	7.2
2	1	564.18	4506.	105.	2.28	1128.68	1118	21	7.509E 00	1.5
3	1	602.94	166.	101.	3.74	1206.15	1198	27	2.773E-01	11.5

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:49:02 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0233C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9634.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2223:59 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.2	219.	512.	0.0022	0.0001.	6.0
Z-ANTIMONY	564.2	237.	6559.	0.0300	0.0004	1.3
Z-ARSENIC	657.4	68.	0. <	0.0012	NOT DETECTABLE	

1009:	15.	12.	14.	23.	14.	15.	16.	17.	21.
1010:	26.	42.	58.	75.	83.	98.	88.	61.	32.
1027:	34.	20.	20.	17.	12.	8.	9.	13.	11.
1117:	11.	15.	15.	18.	24.	30.	39.	88.	220.
1126:	513.	1004.	1270.	1274.	1116.	684.	294.	101.	20.
1135:	8.	9.	9.	3.	10.	7.	8.	4.	6.
1301:	6.	5.	4.	11.	4.	4.	6.	3.	3.
1310:	7.	7.	6.	5.	3.	7.	7.	9.	4.
1319:	4.	3.	3.	2.	5.	2.	5.	6.	8.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.17	512.	219.	2.95	1022.74	1014	19	8.531E-01	6.0
2	1	564.17	6559.	237.	2.30	1128.66	1118	22	1.093E 01	1.3
3	1	602.73	192.	121.	2.44	1205.73	1199	21	3.205E-01	10.8

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 \*\*\*\*\* 19 DEC 1979 9:50:08 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0234A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8570.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2234:13 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	767.	475.	0.0023	0.0002	9.5
%-ANTIMONY	564.2	940.	20255.	0.1043	0.0008	0.7
%-ARSENIC	657.4	110.	0. <	0.0017	NOT DETECTABLE	

1009:	44.	39.	26.	34.	28.	34.	33.	29.	44.
1018:	40.	62.	83.	94.	91.	90.	84.	77.	51.
1027:	43.	51.	44.	30.	34.	40.	36.	29.	29.
1117:	50.	82.	85.	72.	74.	90.	111.	227.	734.
1126:	1715.	2939.	4031.	4095.	3316.	2126.	991.	303.	48.
1135:	13.	11.	10.	9.	7.	8.	14.	7.	8.
1301:	8.	8.	7.	6.	14.	4.	6.	5.	9.
1310:	6.	3.	8.	12.	13.	16.	9.	11.	8.
1319:	5.	5.	5.	6.	8.	7.	2.	9.	7.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.89	475.	767.	3.40	1022.18	1013	26	7.920E-01	9.4
2	1	564.17	20255.	940.	2.30	1128.66	1120	21	3.376E 01	0.7
3	1	602.74	616.	178.	2.54	1205.75	1194	23	1.027E 00	5.1

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\*\*\*\*\* 19 DEC 1979 9:51:12 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
SAMPLE IDENTIFICATION: 0234B  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 5308.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 18DEC79 2244:28 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

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\*  
DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	438.	272.	0.0022	0.0003	12.5
%-ANTIMONY	564.2	598.	12461.	0.1038	0.0010	0.9
%-ARSENIC	657.4	81.	0. <	0.0023	NOT DETECTABLE	
1009:	18.	18.	30.	17.	11.	28.
1018:	33.	32.	37.	50.	59.	57.
1027:	25.	27.	25.	18.	22.	17.
1117:	35.	54.	41.	55.	40.	60.
1126:	975.	1858.	2405.	2534.	2062.	1373.
1135:	11.	7.	11.	6.	8.	6.
1301:	3.	4.	5.	5.	3.	4.
1310:	10.	6.	7.	5.	9.	8.
1319:	7.	2.	8.	2.	4.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.20	272.	438.	3.25	1022.81	1016	24	4.539E-01	12.4
2	1	564.19	12461.	598.	2.29	1128.70	1119	23	2.077E 01	0.9
3	1	602.80	361.	190.	2.16	1205.86	1194	33	6.022E-01	7.5



\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:52:18 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q234C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 3665.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2254:41 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	336.	218.	0.0025	0.0003	13.7
%-ANTIMONY	564.2	405.	8915.	0.1077	0.0012	1.1
%-ARSENIC	657.4	71.	0. <	0.0032	NOT DETECTABLE	

1009:	21.	17.	10.	12.	18.	12.	14.	19.	25.
1018:	25.	25.	37.	47.	48.	46.	48.	35.	28.
1027:	26.	15.	13.	11.	12.	13.	13.	16.	18.
1117:	31.	32.	37.	36.	45.	43.	44.	97.	277.
1126:	719.	1332.	1749.	1785.	1504.	970.	398.	112.	32.
1135:	5.	1.	8.	9.	13.	3.	5.	4.	5.
1301:	4.	8.	7.	5.	7.	3.	2.	5.	9.
1310:	6.	5.	3.	3.	7.	8.	4.	5.	9.
1319:	3.	4.	5.	5.	4.	5.	8.	6.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	218.	336.	3.02	1022.43	1014	21	3.633E-01	13.7
2	1	564.18	8915.	405.	2.29	1128.69	1120	18	1.486E 01	1.1
3	1	602.89	264.	65.	2.30	1206.06	1196	20	4.395E-01	7.5

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 \*\*\*\*\* 19 DEC 1979 9:53:26 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q235A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8812.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2304:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	532.	552.	0.0027	0.0002	7.3
Z-ANTIMONY	564.2	1424.	23424.	0.1179	0.0008	0.7
Z-ARSENIC	657.4	124.	0. <	0.0017	NOT DETECTABLE	

1009:	33.	38.	26.	23.	32.	29.	38.	40.	37.
1018:	48.	69.	79.	106.	99.	92.	100.	73.	66.
1027:	51.	42.	40.	25.	38.	34.	32.	25.	31.
1117:	79.	83.	101.	94.	88.	83.	129.	244.	754.
1126:	1882.	3505.	4523.	4822.	3913.	2553.	1155.	311.	52.
1135:	16.	6.	11.	4.	9.	15.	13.	6.	9.
1301:	2.	8.	8.	6.	6.	3.	5.	4.	6.
1310:	11.	7.	9.	9.	9.	15.	9.	14.	8.
1319:	12.	10.	5.	7.	5.	6.	6.	10.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.94	552.	532.	3.44	1022.28	1012	19	9.199E-01	7.3
2	1	564.19	23424.	1424.	2.29	1128.70	1120	26	3.904E 01	0.7
3	1	602.80	718.	217.	2.66	1205.88	1197	17	1.196E 00	4.7

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 \*\*\*\*\* 19 DEC 1979 9:54:29 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q235B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5545.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2315:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.1	440.	293.	0.0023	0.0003	11.7
%-ANTIMONY	564.2	910.	14570.	0.1168	0.0010	0.9
%-ARSENIC	657.4	85.	0. <	0.0023	NOT DETECTABLE	

1009:	22.	21.	26.	16.	24.	24.	17.	23.	32.
1018:	30.	33.	49.	65.	54.	79.	54.	48.	38.
1027:	36.	21.	30.	17.	19.	12.	22.	18.	13.
1117:	57.	57.	58.	56.	36.	68.	78.	169.	449.
1126:	1163.	2230.	2850.	2930.	2430.	1555.	723.	197.	40.
1135:	7.	7.	8.	5.	9.	5.	7.	10.	8.
1301:	1.	5.	11.	7.	8.	2.	5.	12.	7.
1310:	5.	3.	3.	11.	9.	12.	3.	9.	7.
1319:	4.	8.	4.	5.	4.	5.	4.	4.	3.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	293.	440.	2.87	1022.66	1014	20	4.888E-01	11.7
2	1	564.17	14570.	910.	2.29	1128.67	1120	28	2.428E 01	0.9
3	1	602.81	383.	280.	2.20	1205.89	1197	35	6.385E-01	8.0

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:55:34 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q235C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6203.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2325:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OC179 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	450.	416.	0.0029	0.0003	8.7
Z-ANTIMONY	564.2	740.	15983.	0.1147	0.0010	0.8
Z-ARSENIC	657.4	96.	0. <	0.0022	NOT DETECTABLE	

1009:	23.	26.	20.	24.	24.	19.	27.	23.	34.
1018:	39.	48.	55.	89.	83.	74.	68.	59.	52.
1027:	30.	30.	30.	25.	24.	19.	23.	22.	26.
1117:	44.	78.	61.	65.	66.	69.	83.	181.	530.
1126:	1320.	2381.	3138.	3259.	2683.	1693.	752.	203.	39.
1135:	13.	9.	6.	11.	6.	6.	11.	10.	10.
1301:	5.	7.	4.	7.	4.	4.	9.	10.	6.
1310:	11.	6.	7.	10.	10.	6.	10.	3.	7.
1319:	10.	5.	5.	1.	6.	5.	4.	7.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	510.95	416.	450.	3.20	1022.31	1013	20	6.927E-01	8.7
2	1	564.17	15983.	740.	2.28	1128.68	1121	20	2.664E 01	0.8
3	1	602.75	479.	155.	2.39	1205.77	1199	20	7.983E-01	5.9

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:56:39 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q236A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11815.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2335:43 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	740.	678.	0.0025	0.0002	6.9
%-ANTIMONY	564.2	1573.	31786.	0.1200	0.0007	0.6
%-ARSENIC	657.4	149.	0. <	0.0014	NOT DETECTABLE	

1009:	47.	46.	40.	48.	54.	50.	44.	53.	45.
1018:	65.	77.	104.	136.	172.	170.	131.	93.	90.
1027:	60.	62.	52.	38.	40.	40.	48.	38.	49.
1117:	94.	114.	132.	137.	123.	131.	148.	306.	933.
1126:	2561.	4735.	6235.	6442.	5291.	3523.	1499.	458.	83.
1135:	28.	18.	10.	18.	12.	14.	16.	8.	18.
1301:	13.	9.	10.	11.	10.	11.	10.	14.	10.
1310:	7.	14.	5.	18.	18.	9.	14.	13.	12.
1319:	12.	7.	10.	11.	4.	7.	9.	14.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	678.	740.	2.57	1022.57	1015	17	1.129E 00	6.9
2	1	564.19	31786.	1573.	2.29	1128.70	1121	22	5.298E 01	0.6
3	1	602.73	971.	306.	2.35	1205.73	1197	24	1.619E 00	4.1

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:57:43 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q236B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9961.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2346:02 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 604. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932263 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	599.	557.	0.0025	0.0002	7.5
%-ANTIMONY	564.2	1000.	25627.	0.1150	0.0008	0.7
%-ARSENIC	657.4	113.	0. <	0.0015	NOT DETECTABLE	

1009:	43.	34.	30.	35.	36.	35.	23.	36.	37.
1018:	61.	72.	79.	92.	100.	121.	102.	90.	71.
1027:	47.	52.	34.	39.	29.	29.	26.	28.	31.
1117:	83.	94.	81.	104.	93.	104.	142.	276.	806.
1126:	2127.	3843.	4947.	5120.	4137.	2766.	1227.	358.	63.
1135:	10.	14.	8.	6.	19.	11.	12.	12.	7.
1301:	6.	4.	7.	6.	7.	7.	4.	3.	10.
1310:	10.	11.	8.	12.	13.	6.	7.	5.	7.
1319:	9.	7.	8.	7.	8.	9.	7.	3.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.18	557.	599.	3.28	1022.77	1014	19	9.278E-01	7.5
2	1	564.17	25627.	1000.	2.32	1128.66	1119	20	4.271E 01	0.6
3	1	602.81	744.	236.	2.49	1205.89	1198	21	1.241E 00	4.7

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:58:47 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0236C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5924.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 18DEC79 2356:20 \* FWHM(1332) 2.390  
 PRESET TIME (LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	593.	271.	0.0021	0.0003	14.1
%-ANTIMONY	564.2	608.	15350.	0.1160	0.0010	0.9
%-ARSENIC	657.4	88.	0. <	0.0023	NOT DETECTABLE	

1009:	27.	22.	33.	25.	19.	28.	24.	24.	27.
1018:	29.	41.	56.	56.	67.	74.	74.	47.	37.
1027:	30.	34.	21.	18.	20.	20.	24.	20.	31.
1117:	41.	53.	50.	59.	54.	69.	82.	188.	499.
1126:	1306.	2227.	2989.	2990.	2554.	1625.	781.	224.	49.
1135:	8.	7.	13.	12.	8.	13.	6.	10.	9.
1301:	7.	7.	11.	6.	4.	8.	5.	8.	5.
1310:	6.	5.	6.	5.	7.	10.	10.	7.	8.
1319:	8.	8.	3.	6.	5.	5.	6.	5.	5.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	C15/SEC	%ERR
1	1	511.12	271.	593.	2.80	1022.65	1015	21	4.517E-01	14.1
2	1	564.18	15350.	608.	2.34	1128.68	1119	19	2.558E 01	0.8
3	1	602.78	438.	247.	2.30	1205.83	1198	34	7.299E-01	7.0

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 9:59:56 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0239A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8751.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 6:34 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4872.	15420.	0.0800	0.0009	1.2
%-ANTIMONY	564.2	4422.	114520.	0.5870	0.0020	0.3
%-ARSENIC	657.4	401.	0. <	0.0032	NOT DETECTABLE	

1009:	179.	175.	162.	186.	192.	222.	270.	295.	431.
1018:	732.	1102.	1629.	2215.	2414.	2363.	2126.	1727.	1088.
1027:	702.	415.	290.	188.	146.	156.	150.	129.	156.
1117:	308.	406.	388.	412.	413.	409.	615.	1193.	3688.
1126:	9389.	16946.	22530.	22831.	19193.	12084.	5552.	1594.	319.
1135:	97.	77.	64.	73.	58.	53.	66.	42.	69.
1301:	30.	31.	24.	21.	32.	18.	27.	30.	26.
1310:	19.	37.	28.	40.	39.	35.	23.	45.	24.
1319:	30.	28.	27.	25.	24.	25.	22.	22.	38.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	15420.	4872.	3.15	1022.51	1011	32	2.570E 01	1.0
2	1	564.17	114520.	4422.	2.29	1128.68	1120	19	1.909E 02	0.3
3	1	602.00	3362.	754.	2.35	1205.86	1195	22	5.603E 00	2.1
4	1	646.09	294.	545.	2.60	1292.38	1285	20	4.904E-01	12.6



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 \*\*\*\*\* 19 DEC 1979 10:01:01 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q239B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8429.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 17:05 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3648.	14045.	0.0763	0.0009	1.2
%-ANTIMONY	564.2	751.	108320.	0.5775	0.0020	0.3
%-ARSENIC	657.4	386.	0. <	0.0033	NOT DETECTABLE	

1009:	176.	179.	166.	161.	182.	198.	233.	297.	450.
1018:	680.	1015.	1486.	2008.	2326.	2314.	1991.	1569.	995.
1027:	652.	393.	274.	208.	160.	155.	137.	127.	136.
1117:	295.	359.	384.	367.	398.	400.	613.	1143.	3408.
1126:	8741.	16238.	21099.	21649.	17543.	11302.	5026.	1480.	288.
1135:	94.	68.	61.	69.	51.	51.	58.	34.	40.
1301:	38.	34.	26.	29.	23.	24.	26.	20.	27.
1310:	24.	27.	29.	27.	38.	44.	40.	32.	36.
1319:	15.	30.	17.	26.	22.	20.	22.	28.	15.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	14045.	3648.	3.00	1022.53	1011	24	2.341E 01	1.0
2	6	559.75	1337.	592.	1.50	1119.83	1111	27	2.229E 00	3.8
3	6	564.16	108320.	751.	2.30	1128.65	1111	27	1.805E 02	0.3
4	1	602.82	3214.	452.	2.31	1205.92	1198	16	5.357E 00	2.0
5	1	645.93	225.	367.	2.03	1292.07	1286	13	3.755E-01	13.8

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 \*\*\*\*\* 19 DEC 1979 10:02:09 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q239C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 0501.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 27:31 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4430.	15106.	0.0822	0.0010	1.2
%-ANTIMONY	564.2	713.	111237.	0.5891	0.0020	0.3
%-ARSENIC	657.4	424.	0. <	0.0034	NOT DETECTABLE	

1009:	153.	159.	171.	192.	170.	219.	249.	329.	462.
1010:	723.	1122.	1583.	2138.	2349.	2375.	2098.	1597.	1128.
1027:	768.	407.	237.	188.	179.	143.	162.	145.	143.
1117:	343.	409.	394.	395.	375.	392.	564.	1144.	3625.
1126:	8986.	16363.	21381.	21861.	18366.	11813.	5197.	1457.	306.
1135:	107.	65.	76.	56.	49.	52.	48.	53.	47.
1301:	27.	34.	33.	33.	24.	26.	18.	24.	20.
1310:	20.	40.	32.	25.	56.	36.	30.	36.	36.
1319:	35.	27.	31.	28.	22.	24.	25.	23.	23.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	15106.	4430.	3.15	1022.50	1011	29	2.518E 01	1.0
2	4	559.47	1996.	1293.	3.04	1119.28	1109	30	3.327E 00	3.4
3	4	564.17	111237.	713.	2.32	1128.68	1109	30	1.854E 02	0.3
4	1	602.81	3143.	641.	2.36	1205.89	1195	19	5.238E 00	2.1
5	1	645.94	299.	455.	2.83	1292.08	1284	17	4.978E-01	11.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 10:03:15 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 0240A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9207.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 38:01 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.3	240.	278.	0.0014	0.0001	9.9
%-ANTIMONY	564.2	392.	10151.	0.0497	0.0005	1.0
%-ARSENIC	657.4	80.	0. <	0.0014	NOT DETECTABLE	

1009:	16.	13.	12.	17.	25.	21.	22.	19.	15.
1010:	28.	26.	42.	45.	55.	50.	50.	39.	40.
1027:	18.	16.	20.	17.	12.	7.	17.	18.	15.
1117:	21.	22.	30.	30.	44.	42.	49.	113.	297.
1126:	773.	1482.	2036.	1989.	1688.	1126.	488.	134.	34.
1135:	7.	6.	5.	8.	7.	3.	9.	6.	2.
1301:	4.	3.	8.	5.	4.	11.	9.	5.	3.
1310:	7.	8.	6.	11.	8.	4.	6.	6.	10.
1319:	4.	4.	3.	6.	2.	5.	2.	1.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.29	278.	240.	3.49	1022.99	1016	16	4.625E-01	9.9
2	1	564.19	10151.	392.	2.29	1128.71	1118	27	1.692E 01	1.0
3	1	602.68	328.	150.	2.30	1205.62	1200	24	5.463E-01	7.6

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 10:04:19 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q2400  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10669.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 48:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	403.	340.	0.0015	0.0001	10.0
%-ANTIMONY	564.2	430.	12010.	0.0509	0.0005	1.0
%-ARSENIC	657.4	80.	0. <	0.0012	NOT DETECTABLE	

1009:	18.	19.	21.	22.	16.	15.	23.	20.	22.
1018:	32.	39.	35.	61.	60.	74.	50.	52.	44.
1027:	19.	13.	22.	23.	18.	12.	13.	17.	13.
1117:	31.	36.	36.	39.	35.	54.	67.	142.	365.
1126:	983.	1756.	2319.	2429.	2056.	1251.	584.	171.	44.
1135:	10.	7.	6.	6.	8.	11.	5.	5.	5.
1301:	8.	5.	7.	10.	3.	5.	5.	3.	6.
1310:	8.	8.	3.	8.	13.	5.	4.	5.	6.
1319:	5.	6.	3.	4.	5.	4.	4.	3.	6.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.15	340.	403.	3.23	1022.70	1014	23	5.665E-01	10.0
2	1	564.19	12010.	430.	2.29	1128.70	1119	20	2.002E 01	0.9
3	1	602.78	341.	186.	2.23	1205.83	1199	24	5.686E-01	7.8

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 10:05:24 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: Q240C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10333.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 58:30 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	333.	306.	0.0014	0.0001	10.2
%-ANTIMONY	564.2	404.	11365.	0.0498	0.0005	1.0
%-ARSENIC	657.4	84.	0. <	0.0013	NOT DETECTABLE	

1009:	16.	18.	22.	16.	9.	17.	19.	24.	19.
1018:	25.	34.	43.	58.	51.	61.	58.	51.	37.
1027:	36.	17.	21.	15.	22.	23.	15.	16.	16.
1117:	35.	35.	41.	27.	45.	49.	65.	125.	346.
1126:	927.	1643.	2240.	2257.	1931.	1215.	550.	159.	26.
1135:	15.	9.	5.	9.	8.	6.	10.	5.	7.
1301:	10.	1.	8.	10.	10.	6.	4.	12.	5.
1310:	5.	5.	8.	6.	6.	7.	13.	7.	10.
1319:	2.	2.	8.	4.	6.	9.	9.	11.	9.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.23	306.	333.	3.46	1022.87	1012	18	5.104E-01	10.2
2	1	564.19	11365.	404.	2.29	1128.70	1120	19	1.894E 01	1.0
3	1	602.78	340.	140.	2.46	1205.84	1198	17	5.670E-01	7.3

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 10:06:31 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: S626A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9497.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 100:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	4675.	15338.	0.0775	0.0009	1.2
Z-ANTIMONY	564.2	1414.	149968.	0.7161	0.0021	0.3
Z-ARSENIC	657.4	549.	0. <	0.0035	NOT DETECTABLE	

1009:	244.	227.	204.	252.	231.	277.	307.	346.	463.
1010:	682.	1122.	1753.	2178.	2417.	2472.	2193.	1633.	1201.
1027:	715.	478.	300.	256.	212.	197.	184.	198.	189.
1117:	422.	502.	523.	551.	495.	565.	706.	1683.	4810.
1126:	12289.	22314.	28954.	29503.	24704.	15765.	7059.	2044.	461.
1135:	155.	104.	87.	98.	87.	72.	77.	101.	74.
1301:	40.	44.	26.	32.	29.	35.	28.	33.	42.
1310:	37.	35.	50.	49.	48.	55.	56.	45.	39.
1319:	36.	35.	22.	18.	30.	40.	40.	21.	27.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	15338.	4675.	3.15	1022.50	1011	23	2.556E 01	1.0
2	9	559.67	1995.	1040.	1.38	1119.67	1113	46	3.326E 00	3.2
3	9	564.17	149968.	1414.	2.32	1128.66	1113	46	2.499E 02	0.3
4	1	602.02	4291.	732.	2.40	1205.91	1198	16	7.152E 00	1.8
5	1	639.56	190.	504.	2.90	1279.33	1272	12	3.170E-01	18.2
6	1	646.01	262.	555.	2.90	1292.22	1284	15	4.371E-01	14.1

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 10:07:38 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: S626B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9747.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 119:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GLL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	4744.	15183.	0.0755	0.0009	1.2
Z-ANTIMONY	564.2	1134.	152944.	0.7129	0.0021	0.3
Z-ARSENIC	657.4	568.	0. <	0.0035	NOT DETECTABLE	

1009:	237.	240.	208.	238.	272.	261.	300.	334.	492.
1018:	761.	1136.	1719.	2161.	2478.	2478.	2143.	1645.	1185.
1027:	739.	438.	331.	237.	218.	177.	182.	195.	167.
1117:	406.	483.	543.	517.	547.	593.	806.	1726.	5129.
1126:12651.	22797.	29606.	30123.	24880.	15911.	7023.	2053.	418.	
1135:	156.	122.	107.	91.	103.	86.	99.	69.	76.
1301:	38.	56.	47.	32.	32.	25.	42.	32.	43.
1310:	36.	37.	43.	58.	60.	58.	52.	40.	40.
1319:	34.	37.	30.	32.	48.	34.	24.	38.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	15183.	4744.	3.11	1022.49	1011	23	2.531E 01	1.0
2	5	559.71	1749.	1046.	1.69	1119.75	1109	30	2.916E 00	3.5
3	5	564.16	152944.	1134.	2.32	1128.64	1109	30	2.549E 02	0.3
4	1	602.84	4435.	965.	2.33	1205.95	1196	20	7.392E 00	1.8
5	1	646.04	262.	562.	2.46	1292.28	1287	13	4.368E-01	14.2

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 \*\*\*\*\* 19 DEC 1979 10:08:54 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 5626C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 101.86.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 129:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5400.	16885.	0.0811	0.0009	1.1
%-ANTIMONY	564.2	1199.	163508.	0.7307	0.0021	0.3
%-ARSENIC	657.5	529.	197.	0.0058	0.0011	18.1

1009:	229.	243.	245.	226.	292.	307.	302.	381.	536.
1018:	933.	1263.	1889.	2476.	2750.	2695.	2428.	1812.	1294.
1027:	828.	503.	342.	254.	229.	201.	185.	200.	212.
1117:	440.	484.	594.	596.	537.	601.	897.	1783.	5337.
1126:	13902.	24334.	31519.	32015.	26666.	16951.	7284.	2133.	464.
1135:	152.	118.	111.	105.	115.	93.	96.	78.	79.
1301:	37.	49.	39.	48.	40.	46.	45.	42.	36.
1310:	36.	37.	52.	45.	64.	80.	65.	53.	50.
1319:	43.	31.	29.	41.	46.	43.	52.	38.	30.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	16885.	5400.	3.10	1022.47	1011	24	2.814E 01	1.0
2	10	559.72	2199.	893.	1.33	1119.77	1107	39	3.665E 00	2.9
3	10	564.15	163508.	1199.	2.32	1128.63	1107	39	2.725E 02	0.2
4	1	602.80	4755.	1166.	2.29	1205.88	1195	21	7.925E 00	1.8
5	1	645.87	300.	546.	2.74	1291.95	1287	12	5.006E-01	12.4
6	1	657.54	197.	529.	2.50	1315.26	1307	14	3.278E-01	18.0



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 \*\*\*\*\* 19 DEC 1979 10:10:02 AM \*\*\*\*\*  
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91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: 5604A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8210.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 140:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 644. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	6803.	1180.	0.0071	0.0007	10.3
%-ANTIMONY	564.1	3517.	324814.	1.8043	0.0042	0.2
%-ARSENIC	657.1	1524.	2850.	0.1050	0.0033	3.1

1009:	446.	495.	526.	450.	447.	477.	442.	482.	482.
1018:	475.	534.	533.	559.	618.	612.	639.	588.	530.
1027:	501.	439.	427.	468.	437.	409.	432.	437.	439.
1117:	4485.	5580.	5673.	4987.	3623.	2427.	2145.	4016.	11602.
1126:	28115.	49058.	62891.	63434.	51820.	32933.	14646.	4387.	1060.
1135:	479.	375.	334.	328.	291.	298.	300.	300.	269.
1301:	103.	92.	114.	110.	106.	120.	93.	112.	130.
1310:	117.	191.	391.	546.	642.	590.	534.	346.	192.
1319:	137.	118.	92.	86.	82.	103.	98.	107.	111.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.32	1180.	6803.	3.20	1023.05	1015	15	1.966E 00	10.3
2	2	559.19	27895.	4121.	2.39	1118.72	1108	34	4.649E 01	0.7
3	2	564.14	324814.	3517.	2.34	1128.60	1108	34	5.414E 02	0.2
4	1	602.76	9358.	3328.	2.37	1205.80	1196	22	1.560E 01	1.4
5	1	645.86	649.	1540.	2.49	1291.93	1285	14	1.082E 00	9.4
6	1	657.11	2850.	1524.	2.42	1314.42	1307	16	4.751E 00	2.7

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 10:11:10 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: S604B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9534.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 151:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 653. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	8611.	1859.	0.0097	0.0007	7.5
%-ANTIMONY	564.1	4300.	376051.	1.8023	0.0040	0.2
%-ARSENIC	657.1	2380.	3073.	0.0980	0.0032	3.3

1009:	553.	575.	529.	475.	502.	520.	544.	524.	555.
1018:	612.	670.	653.	723.	725.	706.	723.	623.	620.
1027:	560.	519.	554.	495.	496.	521.	472.	507.	502.
1117:	5258.	6508.	6587.	5716.	4216.	2868.	2522.	4863.	13456.
1126:	32632.	57479.	73155.	73188.	59357.	37975.	16930.	5090.	1333.
1135:	615.	492.	463.	406.	430.	391.	394.	366.	367.
1301:	142.	116.	157.	136.	150.	128.	137.	132.	170.
1310:	170.	230.	437.	637.	740.	722.	614.	408.	259.
1319:	163.	128.	132.	142.	120.	137.	132.	103.	116.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.76	1859.	8611.	4.03	1021.	93	1013	17 3.099E 00	7.4
2	3	559.18	32462.	4826.	2.40	1118.	70	1107	33 5.410E 01	0.6
3	3	564.13	376051.	4300.	2.34	1128.	58	1107	33 6.268E 02	0.2
4	1	602.79	10700.	3845.	2.35	1205.	86	1196	20 1.783E 01	1.3
5	1	646.15	820.	2145.	2.67	1292.	50	1285	15 1.366E 00	8.7
6	1	657.13	3073.	2380.	2.32	1314.	45	1305	17 5.122E 00	2.9

\*\*\*\*\*  
 \*\*\*\*\* 19 DEC 1979 10:12:18 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RE LEAD-THIRD IRRADIATION

SAMPLE DATE: 18DEC79 1020:00  
 SAMPLE IDENTIFICATION: S604C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9555.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 202:33 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 650. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6516.	1312.	0.0069	0.0006	9.1
%-ANTIMONY	564.1	4012.	359029.	1.7203	0.0039	0.2
%-ARSENIC	657.1	2155.	3041.	0.0972	0.0032	3.2

1009:	550.	536.	505.	508.	547.	542.	545.	521.	519.
1018:	552.	584.	665.	639.	672.	695.	663.	612.	565.
1027:	545.	494.	477.	488.	488.	479.	486.	513.	464.
1117:	4994.	6140.	6181.	5424.	3907.	2665.	2406.	4526.	12543.
1126:	31288.	54440.	69582.	69738.	57274.	36225.	16280.	4842.	1241.
1135:	593.	462.	427.	388.	385.	365.	350.	335.	354.
1301:	139.	146.	123.	128.	129.	128.	123.	145.	138.
1310:	173.	225.	418.	632.	696.	667.	590.	396.	258.
1319:	152.	114.	130.	116.	136.	120.	130.	123.	114.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	1312.	6516.	3.36	1022.41	1017	13	2.187E 00	9.1
2	3	559.18	30614.	4641.	2.41	1118.69	1108	35	5.102E 01	0.7
3	3	564.13	359029.	4012.	2.34	1128.59	1108	35	5.984E 02	0.2
4	1	602.80	10447.	3281.	2.33	1205.87	1197	18	1.741E 01	1.2
5	1	646.11	749.	2231.	2.51	1292.42	1284	17	1.248E 00	9.6
6	1	657.12	3041.	2155.	2.41	1314.42	1307	17	5.069E 00	2.8

4

D

Lab #

9119065 SA1

D

4 TB Irradiation  
12/19/79

Q65C

7394.000

91119065 RF 4TH IRRADIATION

4<sup>th</sup> irradiation  
12/19/79

SAMPLE

SAM. WT.

Z-COPPER

Z-ANTIMONY

Z-ARSENIC

Q262A

9797.000

0.00164

0.01639

&lt;

0.00144

Q262B

9785.000

0.00163

0.01346

&lt;

0.00111

Q262C

8712.000

0.00161

0.01335

&lt;

0.00131

0.00163 AVG

0.01440 AVG

0.00000 AVG

0.000014 SD

0.001727 SD

0.000000 SD

0.868992 %RSD

11.996777 %RSD

0.000000 %RSD

Q263A

7071.000

0.04052

0.73428

0.00583

Q263B

8632.000

0.03987

0.81108

0.00790

Q263C

9377.000

0.04009

0.79643

0.00950

0.04016 AVG

0.78060 AVG

0.00774 AVG

0.000332 SD

0.040777 SD

0.001841 SD

0.827757 %RSD

5.223841 %RSD

23.773943 %RSD

Q266A

10450.000

0.08020

0.61108

&lt;

0.00310

Q266B

8652.000

0.08211

0.58224

&lt;

0.00325

Q266C

9445.000

0.08056

0.58891

&lt;

0.00302

0.08096 AVG

0.59408 AVG

0.00000 AVG

0.001010 SD

0.015098 SD

0.000000 SD

1.248126 %RSD

2.541431 %RSD

0.000000 %RSD

Q267A1

7917.000

0.05848

0.60010

&lt;

0.00321

Q267A2

10271.000

0.06076

0.66342

&lt;

0.00283

Q267A3

10915.000

0.06208

0.70231

&lt;

0.00302

0.06044 AVG

0.65527 AVG

0.00000 AVG

0.001823 SD

0.051588 SD

0.000000 SD

3.015640 %RSD

7.872798 %RSD

0.000000 %RSD

Q267B1

9271.000

0.06360

0.70174

&lt;

0.00306

Q267B2

9634.000

0.05612

0.62020

&lt;

0.00291

Q267B3

9702.000

0.06473

0.68368

&lt;

0.00303

0.06149 AVG

0.66854 AVG

0.00000 AVG

0.004677 SD

0.042825 SD

0.000000 SD

7.607281 %RSD

6.405751 %RSD

0.000000 %RSD

Q267C1

11207.000

0.07912

0.56147

&lt;

0.00274

Q267C2

10136.000

0.07468

0.58586

&lt;

0.00282

Q267C3

9127.000

0.08060

0.62712

0.00418

0.07813 AVG

0.59149 AVG

0.00418 AVG

0.003082 SD

0.033186 SD

0.000000 SD

3.944260 %RSD

5.610662 %RSD

0.000000 %RSD

Q267D1

8528.000

0.05722

0.70007

&lt;

0.00347

Q267D2

9526.000

0.05802

0.72162

&lt;

0.00345

Q267D3

9407.000

0.05884

0.74148

&lt;

0.00348

0.05803 AVG

0.72105 AVG

0.00000 AVG

0.000812 SD

0.020709 SD

0.000000 SD

1.399248 %RSD

2.872076 %RSD

0.000000 %RSD

Q267E1	9206.000	0.05511	0.68394	<	0.00328
Q267E2	8304.000	0.05700	0.64794	<	0.00338
Q267E3	9666.000	0.05639	0.63743	<	0.00302
		0.05617 AVG	0.65584 AVG		0.00000 AVG
		0.000962 SD	0.024721 SD		0.000000 SD
		1.712936 %RSD	3.769357 %RSD		0.000000 %RSD

Q267F1	10682.000	0.05102	0.57144	<	0.00274
Q267F2	8868.000	0.05369	0.68112	<	0.00323
Q267F3	10528.000	0.05301	0.67211	<	0.00322
		0.05257 AVG	0.64156 AVG		0.00000 AVG
		0.001386 SD	0.060890 SD		0.000000 SD
		2.635608 %RSD	9.490926 %RSD		0.000000 %RSD

Q267G1	9748.000	0.05625	0.65377	<	0.00327
Q267G2	10464.000	0.05993	0.63911	<	0.00303
Q267G3	9084.000	0.06359	0.65100	<	0.00317
		0.05993 AVG	0.64796 AVG		0.00000 AVG
		0.003669 SD	0.007789 SD		0.000000 SD
		6.122930 %RSD	1.202000 %RSD		0.000000 %RSD

Q268A1	9805.000	0.03212	0.00159	<	0.00116
Q268A2	10031.000	0.02767	0.00129	<	0.00126
Q268A3	9153.000	0.03337	0.00151	<	0.00136
		0.03105 AVG	0.00146 AVG		0.00000 AVG
		0.002996 SD	0.000158 SD		0.000000 SD
		9.649734 %RSD	10.813051 %RSD		0.000000 %RSD

Q268B1	8221.000	0.03489	0.04812	<	0.00160
Q268B2	7816.000	0.03582	0.05071	<	0.00187
Q268B3	9423.000	0.03725	0.05274	<	0.00155
		0.03599 AVG	0.05052 AVG		0.00000 AVG
		0.001185 SD	0.002318 SD		0.000000 SD
		3.291989 %RSD	4.580567 %RSD		0.000000 %RSD

Q270A	8147.000	0.02532	0.00165	<	0.00154
Q270B	9019.000	0.03165	0.00139	<	0.00140
Q270C	9878.000	0.03017	0.00156	<	0.00123
		0.02904 AVG	0.00153 AVG		0.00000 AVG
		0.003311 SD	0.000131 SD		0.000000 SD
		11.401608 %RSD	8.562455 %RSD		0.000000 %RSD

Q271A	9014.000	0.05339	0.63825	<	0.00304
Q271B	8852.000	0.04818	0.64315	<	0.00307
Q271C	9311.000	0.05603	0.76453	<	0.00343
		0.05253 AVG	0.68197 AVG		0.00000 AVG
		0.003993 SD	0.071535 SD		0.000000 SD
		7.600906 %RSD	10.489442 %RSD		0.000000 %RSD

Q272A	4493.000	0.03567	0.75012	<	0.00599
Q225A	10289.000	0.01047	1.14502		0.25007

(TI)TITLE: 91119065 RF 4TH IRRADIATION  
 (LN)LIBRARY:  
 (SA)SAMPLE TIME: 19DEC79 1030:00  
 (SE)STD ENERGY TOLERANCE: 2.00  
 (UE)UNK ENERGY TOLERANCE: 2.00  
 (TF)THERMAL FLUX: 0.0000E-01  
 (EF)EPITHERMAL FLUX: 0.0000E-01  
 (FF)FAST FLUX: 0.0000E-01  
 (QU)UNITS: UG

	ELEMENT	ENERGY	HALF-LIFE	SEC
1	%-COPPER	511.00	1.2800E 01 H	4.6000E 04
2	%-ANTIMONY	564.09	2.7200E 00 D	2.3501E 05
3	%-ARSENIC	657.41	2.6300E 01 H	9.4600E 04

# STANDARD SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626A	8590.00	FBI1 .A01	100.0	100000.0
2	S626B	8411.00	FBI1 .A02	100.0	100000.0
3	S626C	9050.00	FBI1 .A03	100.0	100000.0
4	S604A	7346.00	FBI1 .A07	100.0	100000.0
5	S604B	8269.00	FBI1 .A08	100.0	100000.0
6	S604C	8545.00	FBI1 .A09	100.0	100000.0

STD: 1 S626A FILE= FBI1 .A01

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 2 S626B FILE= FBI1 .A02

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 3 S626C FILE= FBI1 .A03

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 4 S604A FILE= FBI1 .A07

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 5 S604B FILE= FBI1 .A08

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.00	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 6 S604C

FILE= FBI1 .A09

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

# UNKNOWN SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	Q262A	9797.00	FBI1 .A13	100.0	100000.0
2	Q262B	9705.00	FBI1 .A14	100.0	100000.0
3	Q262C	8712.00	FBI1 .A15	100.0	100000.0
4	Q263A	7071.00	FBI1 .A16	100.0	100000.0
5	Q263B	8632.00	FBI1 .A17	100.0	100000.0
6	Q263C	9377.00	FBI1 .A18	100.0	100000.0
7	Q266A	10450.00	FBI1 .A19	100.0	100000.0
8	Q266B	8652.00	FBI1 .A20	100.0	100000.0
9	Q266C	9445.00	FBI1 .A21	100.0	100000.0
10	Q267A1	7917.00	FBI1 .A22	100.0	100000.0
11	Q267A2	10271.00	FBI1 .A23	100.0	100000.0
12	Q267A3	10915.00	FBI1 .A24	100.0	100000.0
13	Q267B1	9271.00	FBI1 .A25	100.0	100000.0
14	Q267B2	9634.00	FBI1 .A26	100.0	100000.0
15	Q267B3	9702.00	FBI1 .A27	100.0	100000.0
16	Q267C1	11207.00	FBI1 .A28	100.0	100000.0
17	Q267C2	10136.00	FBI1 .A29	100.0	100000.0
18	Q267C3	9127.00	FBI1 .A30	100.0	100000.0
19	Q267D1	8528.00	FBI1 .A31	100.0	100000.0
20	Q267D2	9526.00	FBI1 .A32	100.0	100000.0
21	Q267D3	9407.00	FBI1 .A33	100.0	100000.0
22	Q267E1	9206.00	FBI1 .A34	100.0	100000.0
23	Q267E2	8304.00	FBI1 .A35	100.0	100000.0
24	Q267E3	9666.00	FBI1 .A36	100.0	100000.0
25	Q267F1	10682.00	FBI1 .A37	100.0	100000.0
26	Q267F2	8868.00	FBI1 .A38	100.0	100000.0
27	Q267F3	10528.00	FBI1 .A39	100.0	100000.0
28	Q267G1	9748.00	FBI1 .A40	100.0	100000.0
29	Q267G2	10464.00	FBI1 .A41	100.0	100000.0
30	Q267G3	9084.00	FBI1 .A42	100.0	100000.0
31	Q268A1	9805.00	FBI1 .A43	100.0	100000.0
32	Q268A2	10031.00	FBI1 .A44	100.0	100000.0
33	Q268A3	9153.00	FBI1 .A45	100.0	100000.0
34	Q268B1	8221.00	FBI1 .A46	100.0	100000.0
35	Q268B2	7816.00	FBI1 .A47	100.0	100000.0
36	Q268B3	9423.00	FBI1 .A48	100.0	100000.0
37	Q270A	8147.00	FBI1 .A49	100.0	100000.0
38	Q270B	9019.00	FBI1 .A50	100.0	100000.0
39	Q270C	9878.00	FBI1 .A51	100.0	100000.0
40	Q271A	9014.00	FBI1 .A52	100.0	100000.0
41	Q271B	8852.00	FBI1 .A53	100.0	100000.0
42	Q271C	9311.00	FBI1 .A54	100.0	100000.0
43	Q272A	4493.00	FBI1 .A55	100.0	100000.0
44	Q225A	10289.00	FBI1 .A56	100.0	100000.0
45	Q225B	11117.00	FBI1 .A57	100.0	100000.0
46	Q225C	11304.00	FBI1 .A58	100.0	100000.0
47	Q225D	7635.00	FBI1 .A59	100.0	100000.0
48	Q225E	13545.00	FBI1 .A60	100.0	100000.0
49	Q225F	9443.00	FBI1 .A61	100.0	100000.0



50	Q225G	11742.00	FBI1	.A62	100.0	100000.0
51	Q225H	9156.00	FBI1	.A63	100.0	100000.0
52	Q225I	9151.00	FBI1	.A64	100.0	100000.0
53	Q225J	11008.00	FBI1	.A65	100.0	100000.0
54	Q225K	8062.00	FBI1	.A66	100.0	100000.0
55	Q225L	8081.00	FBI1	.A67	100.0	100000.0
56	Q225M	11447.00	FBI1	.A68	100.0	100000.0
57	Q225N	9414.00	FBI1	.A69	100.0	100000.0
58	Q225O	9191.00	FBI1	.A70	100.0	100000.0
59	Q225P	8375.00	FBI1	.A71	100.0	100000.0
60	Q225Q	10157.00	FBI1	.A72	100.0	100000.0
61	Q225R	9949.00	FBI1	.A73	100.0	100000.0
62	Q225S	9766.00	FBI1	.A74	100.0	100000.0
63	Q225T	12870.00	FBI1	.A75	100.0	100000.0
64	Q302A	11193.00	FBI1	.A76	100.0	100000.0
65	Q302B	10197.00	FBI1	.A77	100.0	100000.0
66	Q302C	6789.00	FBI1	.A78	100.0	100000.0
67	Q302D	8867.00	FBI1	.A79	100.0	100000.0
68	Q302E	9487.00	FBI1	.A80	100.0	100000.0
69	Q302F	9103.00	FBI1	.A81	100.0	100000.0
70	Q302G	8228.00	FBI1	.A82	100.0	100000.0
71	Q302H	7845.00	FBI1	.A83	100.0	100000.0
72	Q302I	12103.00	FBI1	.A84	100.0	100000.0
73	Q302J	9028.00	FBI1	.A85	100.0	100000.0
74	Q302K	7873.00	FBI1	.A86	100.0	100000.0
75	Q302L	11796.00	FBI1	.A87	100.0	100000.0
76	Q302M	10897.00	FBI1	.A88	100.0	100000.0
77	Q302N	12074.00	FBI1	.A89	100.0	100000.0
78	Q302O	10306.00	FBI1	.A90	100.0	100000.0
79	Q302P	11616.00	FBI1	.A91	100.0	100000.0
80	Q302Q	15686.00	FBI1	.A92	100.0	100000.0
81	Q302R	13426.00	FBI1	.A93	100.0	100000.0
82	Q302S	9244.00	FBI1	.A94	100.0	100000.0
83	Q302T	11534.00	FBI1	.A95	100.0	100000.0
84	Q291A1	12499.00	FBI1	.A96	100.0	100000.0
85	Q291A2	15826.00	FBI1	.A97	100.0	100000.0
86	Q291A3	8756.00	FBI1	.A98	100.0	100000.0
87	Q291B1	13440.00	FBI1	.A99	100.0	100000.0
88	Q291B2	14726.00	FBI1	.A100	100.0	100000.0
89	Q291B3	9441.00	FBI1	.A101	100.0	100000.0
90	Q291C1	14763.00	FBI1	.A102	100.0	100000.0
91	Q291C2	8840.00	FBI1	.A103	100.0	100000.0
92	Q291C3	12373.00	FBI1	.A104	100.0	100000.0
93	Q291D1	10756.00	FBI1	.A105	100.0	100000.0
94	Q291D2	16584.00	FBI1	.A106	100.0	100000.0
95	Q291D3	14907.00	FBI1	.A107	100.0	100000.0
96	Q291E1	16118.00	FBI1	.A108	100.0	100000.0
97	Q291E2	10390.00	FBI1	.A109	100.0	100000.0
98	Q291E3	13367.00	FBI1	.A110	100.0	100000.0
99	Q291F1	8801.00	FBI1	.A111	100.0	100000.0
100	Q291F2	10838.00	FBI1	.A112	100.0	100000.0
101	Q291F3	13483.00	FBI1	.A113	100.0	100000.0
102	Q291G1	13510.00	FBI1	.A114	100.0	100000.0
103	Q291G2	8610.00	FBI1	.A115	100.0	100000.0
104	Q291G3	7862.00	FBI1	.A116	100.0	100000.0
105	Q291H1	11589.00	FBI1	.A117	100.0	100000.0
106	Q291H2	10350.00	FBI1	.A118	100.0	100000.0
107	Q291H3	9178.00	FBI1	.A119	100.0	100000.0
108	Q291I1	13041.00	FBI1	.A120	100.0	100000.0
109	Q291I2	11122.00	FBI1	.A121	100.0	100000.0
110	Q291I3	12805.00	FBI1	.A122	100.0	100000.0
111	Q291I1	13041.00	FBI1	.A120	100.0	100000.0
112	Q291I2	11122.00	FBI1	.A121	100.0	100000.0
113	Q291I3	12805.00	FBI1	.A122	100.0	100000.0
114	Q291I3	12805.00	FBI1	.A122	100.0	100000.0
115	Q291I3	12805.00	FBI1	.A122	100.0	100000.0

116	Q291I3	12805.00	FBI1	. R122	100.0	100000.0
117	Q291I1	13041.00	FBI1	. R120	100.0	100000.0
118	Q291I2	11002.00	FBI1	. R121	100.0	100000.0
119	Q291I3	12805.00	FBI1	. R122	100.0	100000.0
120	Q291I3	12805.00	FBI1	. R122	100.0	100000.0
121	Q291I3	12805.00	FBI1	. R122	100.0	100000.0
122	Q291I3	12805.00	FBI1	. R122	100.0	100000.0

\*\*\*\*\*  
\*\*\*\*\* 20 DEC 1979 12:16:12 PM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
SAMPLE IDENTIFICATION: S626A  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 8590.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 19DEC79 1504:52 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.00	25276.	5844.	3.05	1022.41	1011	26	4.213E 01	0.8	3.79E 00
2	5	559.56	2683.	2095.	3.06	1119.46	1110	29	4.472E 00	3.1	5.80E 01
3	5	564.13	150013.	1218.	2.30	1128.59	1110	29	2.500E 02	0.3	
4	1	602.74	3955.	1319.	2.35	1205.76	1198	25	6.592E 00	2.1	2.16E 00
5	1	646.28	213.	844.	2.42	1292.77	1285	15	3.548E-01	20.5	1.88E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	25276.	7.8000E-02	0.0000E-01	8.0948E-02	6.1572E-04
%-ANTIMONY	564.1	150013.	7.2000E-01	0.0000E-01	4.2479E-02	1.1056E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:17:23 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: S626B  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 8411.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1515:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	511.03	24746.	5407.	3.02	1022.46	1012	22	4.124E 01	0.8	5.05E 00
2	9	559.68	2287.	892.	1.35	1119.69	1108	34	3.812E 00	2.8	8.99E 01
3	9	564.13	152441.	1196.	2.32	1128.59	1108	34	2.541E 02	0.3	
4	1	602.77	3951.	1059.	2.35	1205.80	1195	19	6.584E 00	2.0	1.46E 00
5	1	645.52	458.	690.	4.12	1291.25	1287	14	7.625E-01	9.4	6.03E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	24746.	7.8000E-02	0.0000E-01	8.1713E-02	6.2268E-04
Z-ANTIMONY	564.1	152441.	7.2000E-01	0.0000E-01	4.4167E-02	1.1401E-04
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
\*\*\*\*\* 20 DEC 1979 12:18:29 PM \*\*\*\*\*  
\*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00

SAMPLE IDENTIFICATION: 5626C

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 9050.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 19DEC79 1526:01 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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\*\*\*\*\*

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	511.01	25990.	6194.	3.12	1022.43	1011	25	4.332E 01	0.8	2.58E 00
2	6	559.55	2666.	1874.	2.75	1119.44	1108	34	4.443E 00	3.0	4.70E 01
3	6	564.13	157199.	1224.	2.31	1128.59	1108	34	2.620E 02	0.3	
4	1	602.74	4079.	1245.	2.32	1205.74	1197	20	6.798E 00	2.0	1.46E 00
5	1	645.85	249.	788.	2.18	1291.90	1284	14	4.155E-01	17.1	1.27E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	25990.	7.8000E-02	0.0000E-01	8.0530E-02	6.0699E-04
%-ANTIMONY	564.1	157199.	7.2000E-01	0.0000E-01	4.2409E-02	1.0779E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:19:30 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 5604A  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 7346.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1614:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 645. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	510.98	1821.	6976.	3.38	1022.37	1014	16	3.036E 00	6.9	4.47E-01.
2	2	559.17	30901.	3914.	2.41	1118.67	1107	35	5.150E 01.	0.6	7.23E 01.
3	2	564.11	323106.	3056.	2.32	1128.54	1107	35	5.385E 02	0.2	
4	1	602.78	8381.	2912.	2.35	1205.82	1197	18	1.397E 01	1.4	1.19E 00
5	1	645.82	533.	1606.	2.27	1291.85	1286	13	0.887E-01	11.5	2.60E-01.
6	1	657.12	3002.	1985.	2.31	1314.42	1307	17	5.003E 00	2.8	1.22E 01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	3002.	1.0000E-01	0.0000E-01	7.9427E-03	2.2091E-04

\*\*\*\*\*  
\*\*\*\*\* 20 DEC 1979 12:20:34 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
SAMPLE IDENTIFICATION: 5604B  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 8269.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 19DEC79 1625:35 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*  
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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*  
\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR	FIT
1	1	510.99	2161.	7273.	3.59	1022.38	1016	14	3.601E 00	6.0	2.31E 00
2	2	559.16	36409.	4520.	2.38	1118.65	1108	35	6.068E 01	0.6	8.03E 01
3	2	564.10	366272.	3557.	2.34	1128.53	1108	35	6.105E 02	0.2	
4	1	602.74	9574.	3140.	2.35	1205.74	1198	16	1.596E 01	1.3	3.49E 00
5	1	645.83	757.	2111.	2.84	1291.86	1285	15	1.262E 00	9.3	1.63E 00
6	1	657.09	3436.	2316.	2.33	1314.36	1307	17	5.726E 00	2.6	1.01E 00
7	1	665.42	346.	1248.	2.23	1331.02	1326	10	5.760E-01	15.4	5.27E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	3436.	1.0000E-01	0.0000E-01	8.1142E-03	2.1215E-04

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:21:37 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: S604C  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 8545.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TADJ

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1636:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*  
 \*\*\*\*\*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*  
 \*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	ZERR	FIT
1	1	511.07	2513.	8874.	3.65	1022.55	1015	17	4.189E 00	5.7	2.82E 00
2	2	559.16	36152.	5003.	2.37	1118.65	1108	31	6.025E 01	0.6	9.79E 01
3	2	564.10	366271.	4380.	2.34	1128.52	1108	31	6.105E 02	0.2	
4	1	602.74	9356.	3955.	2.28	1205.75	1197	20	1.559E 01	1.4	1.86E 00
5	1	646.01	572.	1992.	2.61	1292.22	1287	13	9.532E-01	11.8	2.79E 00
6	1	657.14	3517.	1988.	2.29	1314.46	1307	15	5.862E 00	2.5	1.10E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	3517.	1.0000E-01	0.0000E-01	8.0782E-03	1.9880E-04



# SUMMARY OF STANDARD CONSTANTS:

## 1. ELEMENT %-COPPER AT 511.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.8000E-02	8.0948E-02	6.1572E-04
S626B	7.8000E-02	8.1713E-02	6.2268E-04
S626C	7.8000E-02	8.0530E-02	6.0699E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	8.1054E-02	3.5509E-04

## 2. ELEMENT %-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.2000E-01	4.2479E-02	1.1056E-04
S626B	7.2000E-01	4.4167E-02	1.1401E-04
S626C	7.2000E-01	4.2409E-02	1.0779E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	4.2985E-02	6.3913E-05

## 3. ELEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604A	1.0000E-01	7.9427E-03	2.2091E-04
S604B	1.0000E-01	8.1142E-03	2.1215E-04
S604C	1.0000E-01	8.0782E-03	1.9880E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	8.0491E-03	1.2126E-04

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:22:58 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q262A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9797.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1720:51 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	300.	536.	0.0016	0.0001	6.3
%-ANTIMONY	564.2	238.	3848.	0.0164	0.0003	1.7
%-ARSENIC	657.4	136.	0. <	0.0014	NOT DETECTABLE	

1009:	17.	18.	11.	20.	13.	14.	19.	17.	18.
1018:	35.	43.	58.	99.	105.	114.	80.	65.	49.
1027:	29.	24.	21.	17.	15.	11.	16.	7.	13.
1117:	21.	7.	19.	14.	20.	33.	27.	55.	123.
1126:	322.	565.	781.	741.	666.	417.	174.	56.	16.
1135:	6.	9.	12.	12.	6.	13.	13.	13.	5.
1301:	10.	10.	10.	6.	6.	14.	15.	12.	16.
1310:	14.	10.	8.	10.	11.	7.	10.	7.	10.
1319:	12.	12.	9.	11.	10.	15.	6.	10.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	536.	300.	2.64	1022.51	1013	20	8.942E-01	6.3
2	1	564.17	3848.	238.	2.29	1128.68	1119	19	6.414E 00	1.7
3	1	602.91	127.	135.	2.96	1206.09	1198	20	2.116E-01	15.7

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:24:02 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF- 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0262B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9785.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1731:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	326.	529.	0.0016	0.0001	6.5
%-ANTIMONY	564.1	221.	3149.	0.0135	0.0003	1.9
%-ARSENIC	657.4	77.	0. <	0.0011	NOT DETECTABLE	

1009:	12.	15.	15.	9.	9.	12.	10.	12.	33.
1018:	26.	36.	69.	65.	90.	88.	87.	66.	36.
1027:	33.	20.	17.	4.	12.	9.	11.	10.	8.
1117:	9.	18.	17.	13.	18.	23.	22.	44.	120.
1126:	288.	462.	639.	652.	483.	339.	150.	49.	21.
1135:	7.	4.	10.	9.	8.	6.	4.	6.	6.
1301:	8.	9.	7.	3.	5.	5.	3.	8.	2.
1310:	7.	7.	8.	3.	7.	4.	6.	4.	7.
1319:	9.	7.	6.	4.	6.	3.	5.	3.	3.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	529.	326.	3.06	1022.62	1014	31	8.810E-01	6.5
2	1	564.14	3149.	221.	2.30	1128.60	1120	18	5.249E 00	1.9
3	1	602.37	86.	165.	2.72	1205.01	1196	22	1.434E-01	23.7

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:25:07 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q262C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8712.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1741:19 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	242.	461.	0.0016	0.0001	6.7
%-ANTIMONY	564.2	176.	2777.	0.0133	0.0003	2.0
%-ARSENIC	657.4	85.	0. <	0.0013	NOT DETECTABLE	

1009:	5.	6.	7.	19.	6.	8.	16.	13.	18.
1010:	20.	32.	52.	78.	75.	79.	83.	51.	36.
1027:	30.	20.	15.	7.	6.	12.	15.	11.	6.
1117:	10.	7.	16.	13.	9.	20.	19.	36.	97.
1126:	232.	412.	548.	534.	466.	296.	135.	48.	11.
1135:	4.	7.	6.	3.	10.	5.	12.	6.	8.
1301:	10.	5.	8.	9.	5.	9.	5.	6.	7.
1310:	6.	7.	7.	8.	7.	6.	6.	8.	9.
1319:	6.	2.	6.	7.	6.	6.	3.	7.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	461.	242.	2.93	1022.66	1013	23	7.676E-01	6.7
2	1	564.17	2777.	176.	2.34	1128.66	1118	22	4.628E 00	2.0
3	1	602.77	118.	169.	2.87	1205.80	1197	25	1.965E-01	18.1

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 \*\*\*\*\* 20 DEC 1979 12:26:13 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q263A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7071.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1751:33 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3696.	9312.	0.0405	0.0006	1.5
%-ANTIMONY	564.1	910.	123733.	0.7343	0.0024	0.3
%-ARSENIC	657.2	344.	164.	0.0058	0.0010	17.9

1009:	163.	164.	197.	181.	170.	182.	226.	265.	373.
1018:	541.	765.	1054.	1426.	1587.	1634.	1420.	1060.	747.
1027:	513.	293.	227.	171.	146.	169.	157.	161.	136.
1117:	509.	630.	598.	601.	571.	525.	711.	1542.	4448.
1126:	10787.	18750.	23472.	24186.	19572.	12496.	5469.	1522.	291.
1135:	114.	93.	62.	85.	54.	54.	64.	64.	54.
1301:	33.	32.	28.	31.	34.	19.	26.	30.	34.
1310:	28.	27.	40.	59.	66.	58.	62.	45.	36.
1319:	28.	30.	33.	30.	33.	24.	29.	32.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	9312.	3696.	3.00	1022.51	1012	21	1.552E 01	1.4
2	3	559.32	3112.	1298.	2.67	1118.98	1107	32	5.187E 00	2.4
3	3	564.13	123733.	910.	2.35	1128.60	1107	32	2.062E 02	0.3
4	1	602.75	3302.	650.	2.32	1205.77	1198	17	5.503E 00	2.1
5	1	645.92	270.	495.	3.31	1292.05	1283	15	4.500E-01	13.1
6	1	657.22	164.	344.	2.15	1314.62	1310	11	2.728E-01	17.8

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 \*\*\*\*\* 20 DEC 1979 12:27:24 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0263B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8632.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1802:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6392.	11078.	0.0399	0.0006	1.5
%-ANTIMONY	564.1	1319.	166536.	0.8111	0.0023	0.3
%-ARSENIC	657.1	572.	269.	0.0079	0.0011	14.0

1009:	225.	257.	283.	243.	279.	277.	295.	359.	453.
1010:	705.	989.	1299.	1698.	1990.	1834.	1625.	1303.	915.
1027:	612.	400.	321.	229.	210.	232.	185.	212.	188.
1117:	698.	815.	841.	719.	724.	708.	928.	2114.	5998.
1126:	14673.	25498.	31990.	32264.	26598.	16419.	7140.	2054.	440.
1135:	157.	116.	128.	93.	108.	109.	107.	91.	99.
1301:	49.	57.	49.	51.	54.	46.	40.	47.	51.
1310:	41.	57.	59.	91.	96.	85.	87.	71.	52.
1319:	37.	41.	48.	38.	43.	44.	50.	54.	36.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	11078.	6392.	3.09	1022.43	1012	27	1.846E 01	1.4
2	3	559.32	3819.	1660.	2.49	1118.98	1107	31	6.365E 00	2.2
3	3	564.12	166536.	1319.	2.34	1128.57	1107	31	2.776E 02	0.2
4	1	602.77	4342.	1304.	2.34	1205.81	1198	22	7.236E 00	1.9
5	1	645.74	332.	672.	2.63	1291.68	1285	14	5.527E-01	12.3
6	1	657.11	269.	572.	2.40	1314.42	1308	13	4.488E-01	14.0

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:28:32 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q263C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9377.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1812:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5956.	11986.	0.0401	0.0005	1.4
%-ANTIMONY	564.1	1403.	177310.	0.7964	0.0022	0.3
%-ARSENIC	657.1	489.	350.	0.0095	0.0010	10.5

1009:	255.	264.	267.	235.	287.	288.	313.	363.	489.
1010:	719.	1009.	1435.	1797.	1926.	1974.	1733.	1378.	985.
1027:	646.	454.	330.	263.	243.	202.	217.	209.	224.
1117:	700.	848.	858.	826.	751.	749.	1018.	2147.	6259.
1126:	15534.	26889.	34460.	34600.	28260.	17781.	7564.	2089.	467.
1135:	168.	132.	126.	115.	120.	107.	116.	91.	104.
1301:	62.	52.	49.	69.	43.	62.	50.	39.	43.
1310:	50.	61.	70.	92.	106.	112.	79.	74.	58.
1319:	33.	37.	44.	53.	41.	58.	43.	48.	43.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	11986.	5956.	3.22	1022.45	1012	25	1.998E 01	1.3
2	3	559.33	4206.	2074.	2.81	1119.00	1108	43	7.010E 00	2.2
3	3	564.13	177310.	1403.	2.33	1128.58	1108	43	2.955E 02	0.2
4	1	602.75	4739.	1020.	2.33	1205.76	1198	16	7.898E 00	1.7
5	1	646.10	293.	840.	2.54	1292.41	1286	15	4.889E-01	15.1
6	1	657.13	350.	489.	2.47	1314.44	1309	12	5.841E-01	10.4

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 \*\*\*\*\* 20 DEC 1979 12:29:43 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0266A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10450.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TABJ

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1823:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	6938.	26469.	0.0002	0.0007	0.9
%-ANTIMONY	564.1	1445.	151328.	0.6111	0.0018	0.3
%-ARSENIC	657.4	710.	0. <	0.0031	NOT DETECTABLE	

1009:	274.	270.	266.	262.	291.	354.	393.	527.	745.
1018:	1182.	1942.	2856.	3704.	4075.	4118.	3741.	2697.	1867.
1027:	1130.	633.	446.	348.	245.	204.	189.	181.	205.
1117:	480.	551.	576.	584.	516.	625.	875.	1902.	5483.
1126:	13161.	23173.	29089.	29583.	24085.	15253.	6413.	1785.	371.
1135:	149.	112.	121.	84.	89.	105.	97.	112.	83.
1301:	46.	36.	45.	52.	40.	48.	36.	52.	47.
1310:	54.	51.	57.	56.	71.	60.	72.	49.	49.
1319:	54.	42.	48.	51.	51.	45.	38.	47.	61.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	26469.	6938.	3.14	1022.47	1011.	30	4.412E 01	0.8
2	5	559.48	2457.	2059.	2.75	1119.29	1111	30	4.095E 00	3.3
3	5	564.13	151328.	1445.	2.34	1128.58	1111	30	2.522E 02	0.3
4	1.	602.79	4155.	1205.	2.30	1205.85	1195	22	6.925E 00	1.9
5	1.	645.78	317.	712.	3.27	1291.76	1284	16	5.282E-01	13.2



\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:30:54 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q266B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8652.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1833:50 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGD	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4116.	22223.	0.0021	0.0007	0.9
%-ANTIMONY	564.1	4626.	119156.	0.5822	0.0020	0.3
%-ARSENIC	657.4	529.	0. <	0.0033	NOT DETECTABLE	

1009:	211.	202.	200.	184.	227.	232.	322.	407.	667.
1010:	1011.	1636.	2288.	3059.	3510.	3446.	2990.	2386.	1488.
1027:	903.	546.	349.	221.	178.	173.	163.	138.	146.
1117:	358.	388.	417.	447.	459.	466.	652.	1480.	4298.
1126:	10495.	18176.	23385.	23518.	19166.	12096.	5212.	1408.	270.
1135:	90.	73.	84.	80.	69.	68.	71.	47.	61.
1301:	29.	31.	51.	31.	38.	28.	33.	32.	33.
1310:	31.	45.	35.	59.	45.	53.	58.	40.	39.
1319:	29.	36.	26.	29.	35.	23.	23.	25.	43.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	22223.	4116.	3.12	1022.48	1011	24	3.704E 01	0.8
2	1	564.13	119156.	4626.	2.32	1128.60	1120	18	1.986E 02	0.3
3	1	602.80	3213.	808.	2.35	1205.88	1195	19	5.355E 00	2.2
4	1	646.04	181.	1408.	2.07	1292.29	1282	32	3.011E-01	30.3

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:32:08 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0266C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9445.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1844:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	4488.	23579.	0.0806	0.0007	0.9
Z-ANTIMONY	564.1	983.	131322.	0.5889	0.0019	0.3
Z-ARSENIC	657.4	538.	0. <	0.0030	NOT DETECTABLE	

1009:	208.	199.	243.	214.	264.	298.	372.	443.	697.
1018:	1102.	1780.	2513.	3226.	3700.	3684.	3106.	2408.	1702.
1027:	995.	637.	399.	278.	231.	179.	182.	177.	196.
1117:	413.	448.	494.	519.	475.	501.	767.	1627.	4721.
1126:	11112.	19962.	25444.	25719.	21111.	13393.	5646.	1574.	306.
1135:	116.	94.	86.	102.	76.	66.	74.	77.	65.
1301:	38.	38.	44.	43.	42.	36.	38.	44.	38.
1310:	24.	27.	46.	62.	51.	41.	60.	45.	35.
1319:	35.	41.	33.	30.	32.	36.	40.	40.	27.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	23579.	4488.	3.17	1022.44	1012	22	3.930E 01	0.8
2	10	559.70	2166.	758.	1.35	1119.74	1107	35	3.609E 00	2.8
3	10	564.14	131322.	983.	2.32	1128.60	1107	35	2.189E 02	0.3
4	1	602.79	3554.	985.	2.34	1205.85	1197	22	5.924E 00	2.1

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 \*\*\*\*\* 20 DEC 1979 12:33:11 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267A1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7917.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1854:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3750.	14210.	0.0585	0.0007	1.1
%-ANTIMONY	564.1	3670.	111959.	0.6001	0.0021	0.3
%-ARSENIC	657.4	420.	0. <	0.0032	NOT DETECTABLE	

1009:	177.	170.	160.	180.	175.	204.	247.	331.	443.
1018:	688.	1098.	1550.	1988.	2245.	2260.	1993.	1501.	1018.
1027:	667.	401.	245.	181.	162.	151.	113.	151.	144.
1117:	295.	295.	323.	335.	404.	417.	630.	1383.	3846.
1126:	9651.	17090.	21798.	22058.	17645.	11595.	4905.	1391.	248.
1135:	93.	72.	68.	76.	67.	51.	62.	69.	48.
1301:	32.	27.	30.	38.	23.	24.	24.	27.	25.
1310:	31.	26.	38.	35.	33.	30.	37.	37.	40.
1319:	27.	26.	35.	25.	22.	22.	35.	39.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	14210.	3750.	3.14	1022.46	1011	24	2.368E 01	1.0
2	1	564.14	111959.	3670.	2.33	1128.60	1118	20	1.866E 02	0.3
3	1	602.77	3010.	663.	2.39	1205.82	1197	17	5.017E 00	2.2

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:34:16 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267A2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10271.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1905:25 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELT-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5369.	18973.	0.0608	0.0006	1.0
%-ANTIMONY	564.1	5396.	160274.	0.6634	0.0020	0.3
%-ARSENIC	657.4	549.	0. <	0.0028	NOT DETECTABLE	

1009:	257.	241.	227.	273.	279.	323.	358.	428.	621.
1018:	977.	1511.	2097.	2652.	3003.	2983.	2514.	2017.	1361.
1027:	858.	537.	336.	293.	235.	243.	185.	218.	194.
1117:	408.	436.	500.	490.	530.	560.	927.	2018.	5937.
1126:	14166.	24590.	31351.	31440.	25683.	16035.	6952.	1836.	372.
1135:	137.	116.	110.	99.	97.	78.	94.	92.	89.
1301:	45.	42.	48.	46.	32.	44.	49.	37.	35.
1310:	40.	49.	44.	51.	39.	51.	47.	53.	49.
1319:	31.	23.	37.	39.	48.	38.	35.	49.	46.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	C/S/SEC	%ERR
1	1	511.00	18973.	5369.	3.19	1022.40	1011	25	3.162E 01	0.9
2	1	564.13	160274.	5396.	2.33	1128.58	1120	18	2.671E 02	0.3
3	1	602.79	4463.	1112.	2.41	1205.85	1198	16	7.438E 00	1.8
4	1	645.90	329.	627.	2.81	1292.01	1285	14	5.487E-01	12.1

\*\*\*\*\*  
\*\*\*\*\* 20 DEC 1979 12:35:23 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
SAMPLE IDENTIFICATION: Q267A3  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 10915.00 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 19DEC79 1915:59 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6416.	20405.	0.0621	0.0006	1.0
%-ANTIMONY	564.1	6389.	179971.	0.7023	0.0020	0.3
%-ARSENIC	657.4	706.	0. <	0.0030	NOT DETECTABLE	

1009:	254.	280.	275.	300.	300.	332.	392.	454.	669.
1010:	1011.	1584.	2256.	2852.	3202.	3241.	2736.	2150.	1585.
1027:	966.	617.	414.	305.	269.	236.	242.	226.	206.
1117:	453.	526.	545.	560.	608.	685.	947.	2175.	6556.
1126:	16042.	27377.	34619.	35560.	28963.	18158.	7885.	2162.	448.
1135:	195.	128.	123.	115.	125.	118.	108.	105.	90.
1301:	51.	56.	39.	53.	48.	55.	55.	47.	47.
1310:	39.	72.	57.	50.	67.	49.	56.	59.	49.
1319:	56.	48.	57.	52.	45.	40.	50.	47.	46.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	20405.	6416.	3.21	1022.46	1011	26	3.401E 01	0.9
2	1	564.13	179971.	6389.	2.34	1128.60	1120	19	3.000E 02	0.2
3	1	602.77	4877.	1216.	2.33	1205.80	1198	17	8.128E 00	1.8
4	1	645.54	375.	897.	2.54	1291.28	1283	17	6.244E-01	12.4

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:36:30 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267B1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9271.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1926:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7483.	17588.	0.0636	0.0007	1.1
%-ANTIMONY	564.1	4788.	152455.	0.7017	0.0021	0.3
%-ARSENIC	657.4	514.	0. <	0.0031	NOT DETECTABLE	

1009:	203.	226.	191.	232.	252.	260.	331.	408.	569.
1010:	827.	1382.	2007.	2404.	2714.	2753.	2410.	1894.	1280.
1027:	811.	508.	347.	273.	232.	192.	210.	182.	210.
1117:	338.	384.	396.	448.	512.	590.	866.	1877.	5425.
1126:13375.	23077.	29666.	29673.	24373.	15445.	6768.	1881.	379.	
1135:	142.	110.	96.	93.	97.	74.	84.	94.	88.
1301:	36.	50.	44.	34.	34.	47.	45.	42.	44.
1310:	52.	31.	34.	36.	45.	47.	51.	39.	33.
1319:	42.	28.	32.	44.	33.	36.	33.	36.	33.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	17588.	7483.	3.21	1022.45	1011.	37	2.931E 01	1.0
2	1	564.13	152455.	4788.	2.34	1128.59	1118	21	2.541E 02	0.3
3	1	602.78	4069.	1244.	2.29	1205.82	1195	21	6.782E 00	2.0
4	1	645.52	256.	567.	3.05	1291.25	1286	12	4.274E-01	14.5

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:37:37 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0267B2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9634.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1937:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5031.	15974.	0.0561	0.0006	1.1
%-ANTIMONY	564.1	4400.	139755.	0.6202	0.0019	0.3
%-ARSENIC	657.4	496.	0. <	0.0029	NOT DETECTABLE	

1009:	219.	230.	224.	219.	246.	280.	315.	377.	518.
1018:	821.	1219.	1737.	2289.	2602.	2592.	2274.	1790.	1161.
1027:	744.	483.	332.	267.	196.	167.	186.	171.	170.
1117:	330.	317.	391.	431.	462.	522.	799.	1705.	4897.
1126:	12036.	21204.	27279.	27482.	22574.	14116.	6129.	1726.	321.
1135:	109.	92.	92.	57.	74.	79.	64.	68.	58.
1301:	27.	24.	39.	37.	32.	27.	22.	27.	38.
1310:	32.	32.	33.	46.	42.	57.	36.	35.	41.
1319:	32.	41.	31.	16.	35.	32.	28.	33.	32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	15974.	5031.	3.08	1022.51	1011	25	2.662E 01	1.0
2	1	564.14	139755.	4400.	2.32	1128.60	1118	22	2.329E 02	0.3
3	1	602.79	3889.	850.	2.33	1205.86	1195	19	6.482E 00	1.9
4	1	646.23	266.	657.	2.11	1292.67	1286	18	4.439E-01	14.9

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:38:44 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267B3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9702.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1947:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5279.	18377.	0.0647	0.0007	1.0
%-ANTIMONY	564.1	4912.	154856.	0.6837	0.0021	0.3
%-ARSENIC	657.4	541.	0. <	0.0030	NOT DETECTABLE	

1009:	226.	243.	219.	248.	323.	281.	345.	466.	601.
1010:	913.	1409.	2005.	2687.	2992.	2987.	2543.	2010.	1339.
1027:	836.	539.	350.	275.	250.	203.	229.	227.	200.
1117:	388.	413.	420.	484.	511.	582.	941.	1915.	5608.
1126:	13452.	23534.	30087.	30490.	24878.	15627.	6878.	1963.	397.
1135:	122.	105.	110.	91.	68.	88.	90.	82.	92.
1301:	39.	33.	47.	46.	43.	45.	40.	41.	29.
1310:	33.	36.	42.	48.	40.	53.	37.	51.	55.
1319:	35.	47.	35.	32.	33.	34.	40.	37.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	18377.	5279.	3.09	1022.44	1011	23	3.063E 01	0.9
2	1	564.14	154856.	4912.	2.33	1128.60	1119	19	2.581E 02	0.3
3	1	602.80	4200.	1093.	2.29	1205.88	1195	19	7.000E 00	1.9
4	1	646.09	318.	779.	2.39	1292.38	1283	19	5.300E-01	13.6



\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:39:52 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0267C1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11207.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 1958:19 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	7839.	25701.	0.0791	0.0007	0.9
%-ANTIMONY	564.1	5837.	146628.	0.5615	0.0017	0.3
%-ARSENIC	657.4	584.	0. <	0.0027	NOT DETECTABLE	

1009:	261.	209.	276.	245.	247.	323.	391.	478.	779.
1018:	1225.	1047.	2785.	3511.	3893.	4018.	3531.	2768.	1764.
1027:	1193.	667.	412.	284.	253.	221.	211.	201.	189.
1117:	426.	484.	528.	550.	545.	578.	886.	1847.	5179.
1126:	12880.	22488.	28486.	28697.	23745.	14997.	6440.	1738.	381.
1135:	136.	107.	108.	111.	94.	91.	69.	74.	84.
1301:	42.	45.	51.	25.	41.	34.	44.	39.	44.
1310:	32.	34.	58.	57.	48.	64.	57.	42.	39.
1319:	38.	38.	33.	31.	35.	39.	21.	44.	32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	25701.	7839.	3.17	1022.50	1011	36	4.283E 01	0.8
2	1	564.14	146628.	5837.	2.33	1128.60	1120	18	2.444E 02	0.3
3	1	602.80	4163.	1078.	2.36	1205.88	1195	19	6.938E 00	1.9
4	1	645.62	285.	626.	2.89	1291.45	1284	15	4.746E-01	13.8

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:40:59 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267C2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10136.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2008:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4722.	21732.	0.0747	0.0007	0.9
%-ANTIMONY	564.1	1025.	138119.	0.5859	0.0018	0.3
%-ARSENIC	657.4	502.	0. <	0.0028	NOT DETECTABLE	

1009:	248.	231.	230.	201.	275.	245.	314.	450.	630.
1018:	985.	1596.	2425.	2858.	3483.	3486.	2880.	2283.	1547.
1027:	947.	598.	376.	269.	235.	193.	206.	158.	182.
1117:	434.	508.	504.	500.	499.	518.	748.	1753.	4792.
1126:11970.	20934.	26798.	26869.	22095.	13786.	6125.	1690.	334.	
1135:	116.	79.	85.	76.	92.	74.	67.	73.	62.
1301:	37.	36.	28.	29.	29.	31.	27.	27.	35.
1310:	29.	28.	42.	43.	55.	46.	45.	38.	40.
1319:	37.	31.	33.	27.	22.	20.	42.	36.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CITS/SEC	%ERR
1	1	511.02	21732.	4722.	3.13	1022.46	1012	24	3.622E 01	0.8
2	9	559.63	2312.	844.	1.40	1119.60	1110	28	3.853E 00	2.7
3	9	564.13	138119.	1025.	2.33	1128.59	1110	28	2.302E 02	0.3
4	1	602.80	3850.	702.	2.34	1205.86	1197	18	6.416E 00	1.9
5	1	646.00	266.	600.	2.42	1292.20	1285	15	4.430E-01	14.4

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 \*\*\*\*\* 20 DEC 1979 12:42:10 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0267C3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9127.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2019:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4446.	20920.	0.0806	0.0008	0.9
%-ANTIMONY	564.1	992.	132880.	0.0271	0.0020	0.3
%-ARSENIC	657.3	300.	142.	0.0042	0.0008	19.3

1009:	184.	211.	201.	223.	219.	259.	332.	446.	570.
1010:	995.	1578.	2203.	2961.	3303.	3266.	2820.	2137.	1491.
1027:	937.	575.	354.	222.	216.	167.	176.	168.	161.
1117:	413.	479.	488.	476.	504.	572.	686.	1570.	4583.
1126:11477.	20213.	25783.	26087.	21350.	13236.	5795.	1671.	325.	
1135:	106.	92.	72.	92.	94.	81.	80.	68.	70.
1301:	46.	27.	27.	37.	31.	21.	36.	32.	35.
1310:	26.	29.	37.	36.	54.	58.	53.	41.	33.
1319:	31.	34.	31.	36.	36.	33.	37.	37.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	20920.	4446.	3.13	1022.43	1011	24	3.487E 01	0.8
2	6	559.46	2282.	1331.	2.45	1119.26	1107	32	3.804E 00	3.1
3	6	564.13	132880.	992.	2.32	1128.59	1107	32	2.215E 02	0.3
4	1	602.82	3737.	738.	2.30	1205.90	1197	18	6.228E 00	1.9
5	1	645.94	254.	574.	2.38	1292.09	1284	14	4.228E-01	14.8
6	1	657.29	142.	300.	2.54	1314.76	1311	10	2.365E-01	19.2

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 \*\*\*\*\* 20 DEC 1979 12:43:18 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267D1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8528.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2029:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELT-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4206.	13746.	0.0572	0.0007	1.2
%-ANTIMONY	564.1	4710.	138344.	0.7001	0.0022	0.3
%-ARSENIC	657.4	528.	0. <	0.0035	NOT DETECTABLE	

1009:	195.	187.	192.	204.	246.	255.	277.	322.	468.
1018:	719.	1079.	1502.	1864.	2230.	2265.	1930.	1509.	1040.
1027:	617.	422.	297.	242.	176.	163.	171.	163.	159.
1117:	366.	368.	396.	426.	447.	548.	727.	1660.	4984.
1126:11994.	20769.	26758.	27303.	22428.	14211.	6025.	1729.	358.	
1135:	142.	97.	77.	82.	96.	62.	68.	72.	80.
1301:	32.	37.	39.	40.	26.	37.	40.	32.	50.
1310:	27.	42.	39.	47.	47.	42.	50.	50.	39.
1319:	31.	33.	31.	35.	33.	31.	29.	23.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1.	511.06	13746.	4206.	3.12	1022.52	1011	24	2.291E 01	1.1
2	1.	564.15	138344.	4710.	2.33	1128.62	1119	20	2.306E 02	0.3
3	1.	602.78	3782.	969.	2.24	1205.84	1195	19	6.304E 00	2.0
4	1.	645.69	305.	684.	2.94	1291.58	1284	19	5.080E-01	13.4

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:44:23 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0267D2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9526.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2040:31 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5072.	15423.	0.0580	0.0007	1.1
%-ANTIMONY	564.1	5140.	158992.	0.7216	0.0022	0.3
%-ARSENIC	657.4	647.	0. <	0.0034	NOT DETECTABLE	

1009:	269.	253.	244.	279.	246.	271.	321.	412.	529.
1018:	832.	1211.	1822.	2238.	2600.	2512.	2110.	1647.	1159.
1027:	751.	457.	346.	280.	226.	227.	192.	193.	222.
1117:	390.	426.	469.	506.	545.	625.	939.	1994.	5516.
1126:	13860.	24065.	30744.	31255.	25699.	16051.	7114.	1885.	421.
1135:	157.	112.	99.	113.	105.	101.	80.	80.	85.
1301:	55.	40.	44.	38.	49.	41.	44.	40.	46.
1310:	53.	51.	56.	54.	51.	63.	52.	47.	45.
1319:	43.	42.	44.	47.	36.	45.	40.	34.	36.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.99	15423.	5072.	3.09	1022.39	1011	23	2.570E 01	1.0
2	1	564.14	158992.	5140.	2.33	1128.61	1118	20	2.650E 02	0.3
3	1	602.78	4331.	1175.	2.30	1205.83	1197	20	7.218E 00	1.9
4	1	645.91	268.	1012.	2.36	1292.01	1280	19	4.463E-01	17.9

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:45:29 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267D3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9407.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2051:05 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6104.	15298.	0.0588	0.0007	1.2
%-ANTIMONY	564.1	5710.	161025.	0.7415	0.0022	0.3
%-ARSENIC	657.4	638.	0. <	0.0035	NOT DETECTABLE	

1009:	255.	230.	235.	255.	257.	315.	317.	414.	527.
1010:	743.	1244.	1724.	2171.	2481.	2459.	2182.	1648.	1164.
1027:	756.	500.	299.	264.	252.	220.	204.	199.	202.
1117:	388.	489.	502.	549.	510.	570.	899.	1982.	5620.
1126:	14124.	24651.	31374.	31642.	25759.	16432.	7162.	2001.	388.
1135:	143.	131.	111.	107.	97.	110.	99.	92.	105.
1301:	45.	34.	42.	48.	40.	37.	52.	53.	43.
1310:	43.	50.	52.	63.	51.	53.	53.	55.	50.
1319:	42.	46.	37.	44.	48.	48.	43.	34.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	15298.	6104.	3.16	1022.45	1011	28	2.550E 01	1.1
2	1	564.13	161025.	5710.	2.33	1128.60	1120	18	2.684E 02	0.3
3	1	602.78	4504.	1197.	2.29	1205.83	1196	21	7.506E 00	1.8
4	1	645.75	304.	536.	2.75	1291.70	1287	11	5.059E-01	12.2

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:46:34 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0267E1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9206.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2101:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6502.	13890.	0.0551	0.0007	1.3
%-ANTIMONY	564.1	4980.	145085.	0.6839	0.0021	0.3
%-ARSENIC	657.4	536.	0. <	0.0033	NOT DETECTABLE	

1009:	208.	248.	228.	205.	249.	248.	279.	357.	475.
1018:	746.	1120.	1574.	2030.	2310.	2270.	2003.	1548.	1059.
1027:	645.	405.	314.	238.	222.	207.	188.	181.	175.
1117:	334.	402.	426.	456.	476.	578.	841.	1764.	5077.
1126:	12511.	21945.	28444.	28429.	23580.	14742.	6473.	1814.	338.
1135:	146.	106.	104.	80.	88.	80.	88.	73.	86.
1301:	43.	40.	51.	36.	39.	32.	40.	40.	39.
1310:	47.	32.	45.	45.	38.	46.	45.	33.	43.
1319:	40.	39.	44.	41.	43.	22.	37.	38.	36.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1.	511.03	13890.	6502.	3.10	1022.46	1011.	31	2.315E 01	1.2
2	1.	564.14	145085.	4980.	2.32	1128.61	1119	20	2.418E 02	0.3
3	1.	602.76	3928.	1071.	2.35	1205.78	1196	21	6.546E 00	2.0
4	1.	645.99	300.	626.	2.84	1292.17	1285	15	5.004E-01	13.1

\*\*\*\*\*  
\*\*\*\*\* 20 DEC 1979 12:47:41 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
SAMPLE IDENTIFICATION: Q267E2  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 8304.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 19DEC79 2112:13 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELT-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4116.	12835.	0.0570	0.0007	1.2
%-ANTIMONY	564.1	4320.	123407.	0.6461	0.0021	0.3
%-ARSENIC	657.4	457.	0. <	0.0034	NOT DETECTABLE	

1009:	187.	185.	187.	228.	222.	226.	237.	328.	480.
1018:	640.	1063.	1434.	1933.	2085.	2095.	1785.	1339.	936.
1027:	593.	389.	240.	196.	179.	149.	156.	161.	153.
1117:	325.	374.	369.	380.	407.	492.	654.	1456.	4262.
1126:	10617.	18597.	24113.	24696.	20197.	12608.	5456.	1495.	304.
1135:	113.	75.	77.	65.	56.	71.	77.	66.	56.
1301:	33.	34.	36.	35.	26.	44.	37.	26.	30.
1310:	25.	36.	42.	48.	46.	40.	39.	37.	32.
1319:	28.	25.	29.	32.	34.	29.	28.	29.	36.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	12835.	4116.	3.08	1022.37	1011	24	2.139E 01	1.1
2	1	564.15	123407.	4320.	2.30	1128.62	1119	20	2.057E 02	0.3
3	1	602.81	3514.	701.	2.30	1205.89	1197	17	5.856E 00	2.0
4	1	645.87	209.	525.	2.51	1291.94	1285	15	3.490E-01	16.9



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 \*\*\*\*\* 20 DEC 1979 12:48:48 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0267E3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9666.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2122:44 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4318.	14640.	0.0564	0.0006	1.1
%-ANTIMONY	564.1	4685.	141448.	0.6374	0.0020	0.3
%-ARSENIC	657.4	488.	0. <	0.0030	NOT DETECTABLE	

1009:	224.	195.	193.	231.	244.	267.	275.	346.	488.
1018:	737.	1123.	1617.	2143.	2413.	2306.	2079.	1592.	1064.
1027:	616.	425.	312.	256.	184.	175.	188.	175.	193.
1117:	337.	393.	435.	423.	491.	561.	741.	1687.	4958.
1126:12371.	21363.	27250.	28023.	22870.	14479.	6269.	1797.	353.	
1135:	128.	95.	94.	89.	90.	90.	62.	84.	69.
1301:	28.	34.	39.	45.	31.	36.	35.	41.	27.
1310:	39.	32.	29.	44.	50.	50.	44.	46.	26.
1319:	39.	29.	33.	43.	33.	35.	28.	36.	36.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	14640.	4318.	3.10	1022.44	1011.	23	2.440E 01	1.0
2	1	564.14	141448.	4685.	2.33	1128.62	1120	18	2.357E 02	0.3
3	1	602.77	3930.	1061.	2.34	1205.82	1196	21	6.549E 00	2.0
4	1	645.97	304.	490.	2.94	1292.15	1286	14	5.071E-01	11.0

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:49:58 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267F1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10682.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2133:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6192.	14500.	0.0510	0.0006	1.2
%-ANTIMONY	564.1	4878.	139871.	0.5714	0.0018	0.3
%-ARSENIC	657.4	486.	0. <	0.0027	NOT DETECTABLE	

1009:	205.	220.	216.	214.	235.	240.	272.	356.	530.
1018:	746.	1113.	1632.	2048.	2427.	2344.	2039.	1649.	1072.
1027:	703.	437.	315.	230.	204.	171.	156.	150.	155.
1117:	345.	390.	428.	430.	438.	501.	746.	1594.	4807.
1126:	12054.	21525.	26909.	27471.	22957.	14151.	6173.	1782.	323.
1135:	124.	104.	89.	83.	86.	80.	73.	69.	73.
1301:	32.	41.	36.	38.	46.	27.	28.	36.	35.
1310:	34.	33.	40.	38.	36.	44.	44.	47.	38.
1319:	31.	32.	34.	28.	40.	27.	33.	30.	28.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	14500.	6192.	3.09	1022.49	1011	32	2.417E 01	1.1
2	1	564.14	139871.	4878.	2.33	1128.61	1120	19	2.331E 02	0.3
3	1	602.82	3852.	1087.	2.27	1205.91	1195	23	6.420E 00	2.0
4	1	646.01	276.	996.	2.85	1292.22	1280	24	4.592E-01	17.3

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 \*\*\*\*\* 20 DEC 1979 12:51:08 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267F2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8868.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2143:48 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELJ-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7781.	12547.	0.0537	0.0008	1.4
%-ANTIMONY	564.1	4508.	138149.	0.6811	0.0021	0.3
%-ARSENIC	657.4	462.	0. <	0.0032	NOT DETECTABLE	

1009:	201.	198.	195.	203.	220.	226.	271.	358.	452.
1018:	670.	1037.	1382.	1825.	2011.	2097.	1799.	1378.	959.
1027:	633.	398.	282.	237.	207.	175.	181.	159.	140.
1117:	335.	375.	400.	419.	437.	512.	781.	1628.	4821.
1126:	11794.	20825.	27262.	27246.	22324.	14119.	6161.	1700.	324.
1135:	115.	103.	92.	82.	82.	77.	71.	71.	56.
1301:	41.	49.	41.	31.	39.	35.	36.	35.	24.
1310:	35.	33.	40.	42.	36.	46.	35.	33.	29.
1319:	42.	41.	26.	30.	37.	32.	30.	41.	27.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	12547.	7781.	3.12	1022.47	1011	42	2.091E 01	1.3
2	1	564.14	138149.	4508.	2.31	1128.61	1119	19	2.302E 02	0.3
3	1	602.79	3600.	1041.	2.33	1205.84	1199	17	6.000E 00	2.1
4	1	645.99	252.	1038.	2.65	1292.17	1280	25	4.200E-01	19.1

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:52:13 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0267F3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10528.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2154:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5278.	14568.	0.0530	0.0006	1.2
%-ANTIMONY	564.1	5429.	161539.	0.6721	0.0020	0.3
%-ARSENIC	657.4	645.	0. <	0.0032	NOT DETECTABLE	

1009:	234.	227.	224.	231.	245.	275.	304.	388.	545.
1018:	783.	1113.	1640.	2107.	2407.	2427.	2005.	1594.	1145.
1027:	734.	449.	322.	256.	223.	218.	215.	191.	200.
1117:	359.	465.	473.	487.	531.	684.	858.	1864.	5719.
1126:13896.	24595.	31718.	31915.	25935.	16392.	7171.	2013.	399.	
1135:	119.	113.	107.	98.	91.	85.	89.	85.	85.
1301:	53.	34.	32.	32.	34.	45.	31.	45.	40.
1310:	53.	47.	53.	51.	68.	55.	50.	51.	40.
1319:	40.	45.	46.	28.	43.	43.	40.	33.	38.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	14568.	5278.	3.09	1022.48	1011	26	2.428E 01	1.1
2	1	564.14	161539.	5429.	2.31	1128.60	1119	19	2.692E 02	0.3
3	1	602.77	4523.	1073.	2.29	1205.80	1195	19	7.539E 00	1.8
4	1	646.05	551.	727.	4.12	1292.30	1285	19	9.189E-01	8.1

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:53:18 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267G1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9748.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2204:52 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	5038.	14179.	0.0563	0.0007	1.2
Z-ANTIMONY	564.1	4770.	145218.	0.6538	0.0020	0.3
Z-ARSENIC	657.4	564.	0. <	0.0033	NOT DETECTABLE	

1009:	213.	215.	223.	188.	237.	260.	308.	355.	492.
1010:	831.	1094.	1527.	2075.	2273.	2302.	2079.	1603.	1082.
1027:	735.	488.	316.	229.	225.	200.	191.	165.	186.
1117:	330.	426.	441.	438.	513.	550.	746.	1783.	4937.
1126:	12638.	21858.	28602.	28747.	23519.	14809.	6390.	1793.	351.
1135:	132.	99.	89.	92.	86.	81.	75.	82.	87.
1301:	38.	48.	45.	41.	41.	38.	44.	31.	36.
1310:	43.	46.	55.	51.	38.	42.	53.	38.	40.
1319:	43.	48.	31.	32.	34.	38.	37.	34.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	14179.	5038.	3.11	1022.54	1011.	25	2.363E 01	1.1
2	1	564.14	145218.	4770.	2.31	1128.61	1120	18	2.420E 02	0.3
3	1	602.80	4057.	1029.	2.38	1205.87	1195	22	6.761E 00	1.9
4	1	646.18	196.	649.	2.43	1292.56	1286	15	3.266E-01	19.7

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:54:25 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q267G2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10464.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2215:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6184.	16063.	0.0599	0.0007	1.1
%-ANTIMONY	564.1	5275.	152104.	0.6391	0.0019	0.3
%-ARSENIC	657.4	554.	0. <	0.0030	NOT DETECTABLE	

1009:	243.	218.	247.	241.	245.	272.	315.	405.	541.
1018:	844.	1299.	1760.	2302.	2631.	2582.	2274.	1762.	1175.
1027:	749.	486.	325.	254.	248.	189.	184.	184.	191.
1117:	402.	437.	432.	457.	509.	554.	807.	1789.	5271.
1126:	13324.	22928.	29695.	29911.	24724.	15482.	6600.	1813.	353.
1135:	141.	112.	84.	97.	89.	81.	75.	81.	91.
1301:	54.	39.	41.	30.	40.	40.	43.	36.	31.
1310:	39.	51.	49.	49.	46.	60.	42.	46.	25.
1319:	36.	38.	42.	48.	43.	35.	29.	36.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	16063.	6184.	3.12	1022.45	1011	29	2.677E 01	1.0
2	1	564.14	152104.	5275.	2.32	1128.61	1119	20	2.535E 02	0.3
3	1	602.77	4286.	985.	2.33	1205.01	1195	20	7.143E 00	1.8
4	1	645.72	325.	599.	2.43	1291.65	1286	14	5.416E-01	12.0

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:55:31 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 026703  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9084.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2226:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4799.	14655.	0.0636	0.0007	1.1
%-ANTIMONY	564.1	4437.	134249.	0.6510	0.0021	0.3
%-ARSENIC	657.4	449.	0. <	0.0032	NOT DETECTABLE	

1009:	167.	195.	198.	220.	238.	239.	274.	332.	455.
1018:	768.	1164.	1607.	2044.	2263.	2361.	2053.	1571.	1077.
1027:	661.	438.	294.	212.	179.	174.	181.	162.	158.
1117:	309.	378.	387.	421.	426.	518.	709.	1505.	4683.
1126:	11484.	20467.	26151.	26555.	21565.	13756.	5949.	1619.	321.
1135:	139.	99.	83.	86.	78.	92.	57.	74.	68.
1301:	49.	33.	38.	37.	36.	38.	31.	25.	37.
1310:	27.	34.	41.	25.	49.	46.	39.	27.	35.
1319:	35.	26.	28.	28.	24.	28.	29.	24.	29.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	14655.	4799.	3.18	1022.48	1011	27	2.443E 01	1.1
2	1	564.14	134249.	4437.	2.32	1128.61	1119	19	2.237E 02	0.3
3	1	602.75	3750.	795.	2.33	1205.77	1198	17	6.250E 00	1.9
4	1	645.94	132.	546.	2.00	1292.09	1287	12	2.201E-01	26.5

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:56:34 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q268A1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9805.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2236:31 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	294.	7915.	0.0321	0.0004	1.2
%-ANTIMONY	564.1	96.	354.	0.0016	0.0001	6.6
%-ARSENIC	657.4	64.	0. <	0.0012	NOT DETECTABLE	

1009:	29.	16.	20.	41.	36.	37.	70.	102.	158.
1010:	312.	536.	765.	1053.	1173.	1242.	1001.	748.	520.
1027:	271.	165.	80.	40.	22.	11.	6.	9.	4.
1117:	7.	7.	4.	5.	4.	9.	9.	5.	18.
1126:	37.	51.	86.	71.	61.	36.	11.	7.	9.
1135:	3.	3.	3.	4.	6.	7.	8.	3.	5.
1301:	5.	2.	6.	2.	8.	2.	3.	3.	1.
1310:	2.	5.	8.	5.	5.	9.	8.	8.	3.
1319:	3.	1.	6.	4.	7.	2.	8.	7.	5.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	7915.	294.	3.10	1022.47	1011	25	1.319E 01	1.2
2	1	564.08	354.	96.	2.16	1128.49	1120	24	5.900E-01	6.6



\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:57:34 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0268A2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10031.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2246:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	351.	6911.	0.0277	0.0004	1.3
%-ANTIMONY	564.0	62.	292.	0.0013	0.0001	7.0
%-ARSENIC	657.4	79.	0. <	0.0013	NOT DETECTABLE	

1009:	23.	21.	17.	21.	37.	38.	57.	98.	158.
1010:	263.	479.	665.	905.	1109.	1079.	954.	647.	428.
1027:	276.	152.	71.	41.	18.	21.	10.	9.	4.
1117:	6.	4.	9.	4.	4.	3.	1.	5.	10.
1126:	34.	55.	74.	62.	44.	28.	10.	4.	3.
1135:	8.	7.	8.	6.	6.	7.	2.	5.	9.
1301:	7.	3.	5.	7.	7.	4.	5.	4.	6.
1310:	7.	9.	4.	7.	4.	5.	11.	6.	4.
1319:	8.	6.	2.	2.	5.	5.	3.	7.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	6911.	351.	2.98	1022.48	1011	27	1.152E 01	1.3
2	1	563.95	292.	62.	2.06	1128.23	1123	13	4.868E-01	7.0

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:58:37 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0268A3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9153.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2256:59 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	351.	7535.	0.0334	0.0004	1.3
%-ANTIMONY	564.1	196.	312.	0.0015	0.0001	8.5
%-ARSENIC	657.4	76.	0. <	0.0014	NOT DETECTABLE	

1009:	17.	18.	17.	27.	22.	48.	51.	93.	175.
1018:	290.	488.	728.	1035.	1131.	1121.	911.	733.	514.
1027:	263.	161.	71.	45.	23.	21.	12.	11.	4.
1117:	6.	5.	6.	7.	11.	12.	13.	9.	15.
1126:	34.	54.	66.	59.	39.	39.	27.	9.	9.
1135:	4.	6.	4.	6.	8.	3.	6.	6.	8.
1301:	4.	2.	6.	9.	5.	7.	10.	12.	4.
1310:	4.	2.	6.	5.	10.	7.	5.	6.	7.
1319:	9.	3.	8.	10.	4.	6.	9.	5.	5.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	7535.	351.	3.15	1022.45	1011	26	1.256E 01	1.2
2	1	564.08	312.	196.	2.62	1128.48	1119	28	5.204E-01	8.5

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 12:59:42 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0268B1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8221.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2307:13 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELJ-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHN1 : 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	693.	7013.	0.0349	0.0005	1.4
%-ANTIMONY	564.2	366.	8915.	0.0481	0.0005	1.1
%-ARSENIC	657.4	85.	0. <	0.0016	NOT DETECTABLE	

1009:	26.	37.	34.	29.	42.	50.	59.	93.	159.
1018:	270.	477.	706.	959.	1014.	1109.	934.	708.	446.
1027:	288.	146.	82.	43.	26.	23.	19.	19.	12.
1117:	19.	20.	23.	27.	34.	41.	53.	111.	278.
1126:	774.	1341.	1658.	1763.	1433.	945.	416.	110.	25.
1135:	11.	9.	7.	13.	4.	3.	12.	10.	8.
1301:	6.	12.	8.	2.	6.	7.	7.	6.	6.
1310:	4.	5.	8.	5.	10.	9.	8.	7.	4.
1319:	6.	5.	8.	6.	3.	3.	6.	5.	5.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	7013.	693.	3.10	1022.49	1011.	28	1.169E 01	1.3
2	1	564.16	8915.	366.	2.37	1128.65	1118	24	1.486E 01	1.1
3	1	602.83	294.	133.	2.46	1205.93	1194	19	4.907E-01	8.0

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:00:48 PM \*\*\*\*\*  
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91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q268B2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7816.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2317:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	547.	6782.	0.0358	0.0005	1.4
%-ANTIMONY	564.1	456.	8917.	0.0507	0.0006	1.1
%-ARSENIC	657.4	105.	0. <	0.0019	NOT DETECTABLE	

1009:	22.	21.	25.	37.	33.	63.	53.	85.	150.
1018:	260.	442.	677.	925.	1008.	1028.	895.	658.	454.
1027:	270.	141.	80.	49.	25.	33.	26.	29.	15.
1117:	27.	28.	28.	31.	44.	45.	55.	119.	298.
1126:	777.	1363.	1750.	1784.	1434.	908.	411.	105.	24.
1135:	15.	15.	8.	12.	11.	12.	6.	8.	12.
1301:	9.	6.	10.	5.	6.	9.	10.	9.	7.
1310:	9.	7.	4.	7.	10.	8.	9.	15.	9.
1319:	3.	7.	10.	4.	6.	10.	11.	6.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	6782.	547.	3.04	1022.46	1011	27	1.130E 01	1.3
2	1	564.14	8917.	456.	2.31	1128.60	1119	24	1.486E 01	1.1
3	1	602.84	349.	230.	3.01	1205.95	1196	34	5.816E-01	8.1

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:01:55 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q268B3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9423.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2327:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	702.	8423.	0.0372	0.0005	1.3
%-ANTIMONY	564.2	435.	11161.	0.0527	0.0005	1.0
%-ARSENIC	657.4	103.	0. <	0.0015	NOT DETECTABLE	

1009:	32.	28.	39.	47.	48.	68.	81.	116.	186.
1018:	358.	607.	823.	1101.	1227.	1210.	1136.	835.	524.
1027:	324.	183.	90.	52.	44.	27.	24.	23.	18.
1117:	24.	31.	36.	44.	47.	39.	67.	127.	358.
1126:	946.	1689.	2116.	2223.	1843.	1135.	534.	153.	36.
1135:	13.	18.	11.	11.	12.	12.	9.	11.	14.
1301:	6.	4.	11.	5.	10.	6.	6.	8.	14.
1310:	7.	9.	9.	2.	6.	12.	6.	3.	7.
1319:	6.	12.	10.	3.	12.	6.	8.	6.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	8423.	702.	3.23	1022.48	1011	26	1.404E 01	1.2
2	1	564.16	11161.	435.	2.33	1128.65	1118	22	1.860E 01	1.0
3	1	602.84	340.	113.	2.60	1205.94	1199	15	5.660E-01	7.0

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:03:00 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q270A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8147.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2337:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	351.	4905.	0.0253	0.0004	1.6
%-ANTIMONY	564.1	157.	301.	0.0016	0.0001	8.2
%-ARSENIC	657.4	74.	0. <	0.0015	NOT DETECTABLE	

1009:	15.	19.	25.	19.	26.	34.	39.	69.	100.
1010:	194.	329.	486.	683.	694.	742.	657.	480.	314.
1027:	186.	98.	55.	33.	15.	11.	11.	9.	5.
1117:	4.	3.	10.	5.	8.	11.	7.	11.	27.
1126:	28.	48.	38.	52.	48.	30.	21.	9.	6.
1135:	9.	1.	6.	4.	8.	9.	11.	7.	7.
1301:	7.	8.	6.	4.	7.	5.	9.	7.	5.
1310:	4.	3.	9.	6.	6.	9.	6.	5.	3.
1319:	8.	7.	3.	8.	9.	7.	6.	9.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	4905.	351.	3.14	1022.48	1012	26	8.174E 00	1.5
2	1	564.07	301.	157.	3.05	1128.46	1118	33	5.014E-01	8.2

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:04:00 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q270B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9019.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2348:10 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	364.	6725.	0.00316	0.0004	1.4
%-ANTIMONY	564.3	121.	280.	0.0014	0.0001	8.2
%-ARSENIC	657.4	75.	0. <	0.0014	NOT DETECTABLE	

1009:	15.	14.	20.	34.	31.	38.	58.	96.	158.
1018:	270.	427.	651.	886.	996.	1035.	886.	684.	444.
1027:	273.	158.	62.	34.	19.	10.	13.	9.	3.
1117:	7.	7.	7.	7.	4.	3.	8.	8.	13.
1126:	23.	43.	55.	81.	58.	29.	17.	6.	9.
1135:	8.	7.	10.	5.	7.	4.	4.	6.	6.
1301:	7.	2.	5.	5.	7.	7.	5.	4.	5.
1310:	2.	7.	7.	12.	5.	4.	6.	3.	4.
1319:	5.	6.	9.	5.	5.	5.	6.	3.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	6725.	364.	3.10	1022.55	1011	26	1.121E 01	1.3
2	1	564.26	280.	121.	1.92	1128.84	1119	22	4.671E-01	8.2

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:05:00 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q270C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9878.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 19DEC79 2358:24 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	375.	6956.	0.0302	0.0004	1.3
%-ANTIMONY	564.4	128.	343.	0.0016	0.0001	7.1
%-ARSENIC	657.4	68.	0. <	0.0012	NOT DETECTABLE	

1009:	22.	22.	20.	20.	31.	51.	62.	98.	158.
1018:	266.	445.	708.	971.	1067.	1043.	889.	649.	461.
1027:	268.	144.	84.	39.	31.	16.	10.	5.	4.
1117:	9.	8.	4.	7.	8.	8.	5.	6.	18.
1126:	28.	55.	54.	69.	82.	42.	16.	11.	3.
1135:	4.	6.	8.	8.	4.	5.	8.	4.	6.
1301:	6.	2.	8.	2.	7.	4.	4.	3.	8.
1310:	4.	8.	5.	3.	5.	4.	5.	9.	5.
1319:	4.	5.	3.	6.	5.	5.	3.	7.	3.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1	1	511.00	6956.	375.	3.08	1022.41	1011	25	1.159E-01	1.3
2	1	564.38	343.	128.	2.36	1129.08	1122	16	5.719E-01	7.1



\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:06:03 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q271A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9014.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 8:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4068.	11129.	0.0534	0.0007	1.3
%-ANTIMONY	564.1	3734.	128255.	0.6382	0.0021	0.3
%-ARSENIC	657.4	371.	0. <	0.0030	NOT DETECTABLE	

1009:	213.	179.	189.	214.	174.	213.	239.	292.	377.
1018:	602.	880.	1313.	1595.	1840.	1847.	1559.	1209.	859.
1027:	567.	345.	258.	192.	182.	160.	166.	142.	168.
1117:	272.	308.	338.	329.	379.	503.	728.	1496.	4341.
1126:10902.	19342.	24931.	25218.	20710.	13376.	5828.	1748.	320.	
1135:	108.	67.	62.	78.	60.	64.	42.	49.	60.
1301:	24.	23.	28.	26.	25.	24.	27.	29.	32.
1310:	35.	35.	26.	33.	25.	37.	33.	21.	19.
1319:	30.	25.	20.	30.	25.	30.	22.	33.	35.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.001	11129.	4068.	3.11	1022.43	1011	24	1.855E 01	1.2
2	1	564.15	128255.	3734.	2.32	1128.63	1119	19	2.138E 02	0.3
3	1	602.80	3720.	828.	2.31	1205.87	1196	18	6.200E 00	2.0
4	1	646.00	267.	544.	2.42	1292.20	1285	17	4.457E-01	13.8

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:07:15 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q271B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8852.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 19:07 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4179.	9770.	0.0482	0.0007	1.4
%-ANTIMONY	564.1	3927.	126682.	0.6431	0.0021	0.3
%-ARSENIC	657.4	360.	0. <	0.0031	NOT DETECTABLE	

1009:	209.	238.	207.	176.	194.	213.	252.	280.	363.
1010:	523.	835.	1134.	1442.	1574.	1596.	1387.	1134.	831.
1027:	497.	341.	224.	182.	164.	187.	147.	152.	156.
1117:	314.	311.	311.	385.	421.	454.	683.	1504.	4378.
1126:10830.	19121.	24768.	25010.	20438.	12927.	5589.	1553.	319.	
1135:	105.	76.	68.	61.	62.	62.	73.	46.	56.
1301:	43.	30.	31.	27.	20.	27.	23.	26.	24.
1310:	29.	27.	21.	29.	36.	29.	30.	30.	24.
1319:	22.	30.	29.	33.	28.	38.	23.	30.	25.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	9770.	4179.	3.27	1022.50	1011	21	1.628E 01	1.4
2	1	564.14	126682.	3927.	2.32	1128.61	1118	21	2.111E 02	0.3
3	1	602.75	3697.	798.	2.38	1205.77	1197	22	6.162E 00	2.0
4	1	645.75	289.	393.	2.64	1291.70	1287	13	4.822E-01	11.3

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:08:23 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: 0271C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9311.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 29:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4692.	11837.	0.0560	0.0007	1.3
%-ANTIMONY	564.1	4757.	158104.	0.7645	0.0023	0.3
%-ARSENIC	657.4	498.	0. <	0.0034	NOT DETECTABLE	

1009:	248.	228.	226.	239.	220.	261.	296.	375.	452.
1018:	676.	966.	1390.	1733.	1979.	1935.	1730.	1334.	913.
1027:	639.	402.	291.	259.	215.	193.	178.	184.	173.
1117:	356.	350.	398.	426.	458.	576.	840.	1918.	5506.
1126:	13566.	23752.	30865.	31277.	25527.	16072.	7033.	2028.	349.
1135:	154.	105.	97.	115.	85.	95.	93.	76.	89.
1301:	43.	48.	38.	33.	36.	31.	36.	36.	34.
1310:	41.	40.	42.	42.	40.	31.	37.	44.	42.
1319:	29.	37.	39.	27.	33.	32.	31.	35.	27.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	11837.	4692.	3.12	1022.46	1011	23	1.973E 01	1.2
2	1	564.14	158104.	4757.	2.32	1128.61	1118	21	2.635E 02	0.3
3	1	602.00	4598.	1144.	2.34	1205.86	1195	22	7.664E 00	1.8
4	1	645.76	343.	824.	2.45	1291.73	1284	21	5.717E-01	13.0

\*\*\*\*\*  
 \*\*\*\*\* 20 DEC 1979 1:09:33 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 RF 4TH IRRADIATION

SAMPLE DATE: 19DEC79 1030:00  
 SAMPLE IDENTIFICATION: Q272A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 4493.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 40:12 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10:  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3284.	3603.	0.0357	0.0010	2.8
%-ANTIMONY	564.2	490.	74716.	0.7501	0.0030	0.4
%-ARSENIC	657.4	347.	0. <	0.0060	NOT DETECTABLE	

1009:	107.	97.	95.	121.	135.	85.	102.	128.	164.
1018:	220.	351.	466.	548.	667.	586.	567.	493.	333.
1027:	214.	185.	111.	102.	80.	75.	91.	88.	89.
1117:	293.	355.	390.	360.	347.	327.	415.	874.	2510.
1126:	6250.	10964.	14457.	14793.	12201.	7753.	3444.	938.	186.
1135:	51.	48.	36.	40.	42.	29.	31.	38.	30.
1301:	19.	16.	22.	18.	22.	18.	15.	14.	12.
1310:	20.	32.	26.	37.	43.	36.	31.	35.	22.
1319:	21.	11.	21.	27.	20.	23.	17.	21.	18.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	3603.	3284.	3.27	1022.53	1013	29	6.004E 00	2.8
2	3	559.51	1944.	892.	2.91	1119.35	1109	29	3.240E 00	3.1
3	3	564.16	74716.	490.	2.31	1128.65	1109	29	1.245E 02	0.4
4	1	602.83	2184.	631.	2.35	1205.94	1196	29	3.641E 00	2.7
5	1	646.25	155.	276.	2.01	1292.70	1285	13	2.586E-01	17.1

91119065 QY RF

LEAD

4 to irradiation  
12/19/79  
Re irradiation  
1/18/80  
%-ARSENIC

SAMPLE	SAM. WT.	%-COPPER	%-ANTIMONY	%-ARSENIC
S626D	9268.000	0.07875	0.73750	0.00487
S626E	10383.000	0.07480	0.71406	0.00450
S626F	11142.000	0.07998	0.71188	0.00443

0.07784 AVG	0.72115 AVG	0.00000 AVG
0.002707 SD	0.014200 SD	0.000000 SD
3.476916 %RSD	1.969095 %RSD	0.000000 %RSD

S604D	7500.000	<	0.01339	1.74046	0.12291
S604E	8555.000		0.00676	1.76665	0.10515
S604F	9037.000	<	0.00339	1.64853	0.09061

0.00676 AVG	1.71855 AVG	0.10622 AVG
0.000000 SD	0.062036 SD	0.016174 SD
0.000000 %RSD	3.609803 %RSD	15.227002 %RSD

Q225A	10289.000		0.01079	1.13211	0.37415
Q225B	11117.000		0.01257	0.68451	0.19507
Q225C	11304.000		0.01580	0.64872	0.17916
Q225D	7635.000		0.01572	2.78725	0.83364
Q225E	13545.000		0.01209	1.00443	0.29215
Q225F	9443.000		0.01190	1.08623	0.31598
Q225G	11742.000		0.01228	0.69168	0.20429
Q225H	9156.000		0.01268	0.68320	0.20478
Q225I	9361.000		0.01185	0.61400	0.17426
Q225J	11008.000		0.01026	0.71117	0.19463
Q225K	8062.000		0.01706	1.01500	0.30067
Q225L	8081.000	<	0.00793	4.66406	1.36977
Q225M	11447.000		0.01142	0.76131	0.21538
Q225N	9414.000		0.01028	1.07756	0.31316
Q225O	9191.000		0.01383	0.61885	0.17381
Q225P	8375.000		0.01270	0.71702	0.20387
Q225Q	10157.000		0.01365	0.60755	0.18207
Q225R	9949.000		0.01768	1.44718	0.42973
Q225S	9766.000		0.00995	0.69794	0.20040
Q2525T	12870.000		0.01172	0.64654	0.19122

0.01285 AVG	1.11482 AVG	0.32741 AVG
0.002539 SD	0.970360 SD	0.287979 SD
19.755190 %RSD	87.042191 %RSD	87.956863 %RSD

Q302A	11193.000	<	0.00231	0.57015	0.12606
Q302B	10197.000	<	0.00281	0.75604	0.17229
Q302C	6789.000	<	0.00293	0.54420	0.12041
Q302D	8867.000	<	0.00321	0.81395	0.18863
Q302E	9487.000	<	0.00304	0.78074	0.18067
Q302F	9103.000	<	0.00257	0.54189	0.11143
Q302G	8228.000	<	0.00274	0.55108	0.11416
Q302H	7845.000	<	0.00345	0.77066	0.16897
Q302I	12103.000	<	0.00239	0.58677	0.11184
Q302J	9028.000	<	0.00278	0.56734	0.12127
Q302K	7873.000	<	0.00332	0.71687	0.15646
Q302L	11796.000		0.00223	0.57191	0.12142
Q302M	10897.000	<	0.00257	0.55206	0.10664
Q302N	12074.000	<	0.00261	0.65597	0.12883
Q302O	10306.000	<	0.00272	0.58350	0.12448
Q302P	11616.000	<	0.00250	0.56556	0.10634
Q302Q	15686.000	<	0.00241	0.67500	0.14355

Q302R	13426.000	0.00321	0.55698	0.11572
Q302S	9244.000	0.00319	0.70051	0.15074
Q302T	11534.000	0.00304	0.71	0.17075
		0.00272 AVG	0.63886 AVG	0.13703 AVG
		0.001599 SD	0.093221 SD	0.026971 SD
		58.706249 %RSD	14.591758 %RSD	19.682447 %RSD

Q291A1	12499.000	0.07148	0.56798	0.00413
Q291A2	15826.000	0.07011	0.57388	0.00362
Q291A3	8756.000	0.07090	0.58662	0.00495
		0.07083 AVG	0.57616 AVG	0.00000 AVG
		0.000688 SD	0.009526 SD	0.000000 SD
		0.971260 %RSD	1.653351 %RSD	0.000000 %RSD

Q291B1	13440.000	0.07878	0.57353	0.00414
Q291B2	14726.000	0.07869	0.58258	0.00404
Q291B3	9441.000	0.07222	0.54474	0.00461
		0.07656 AVG	0.56695 AVG	0.00000 AVG
		0.003759 SD	0.019759 SD	0.000000 SD
		4.909428 %RSD	3.485182 %RSD	0.000000 %RSD

Q291C1	14763.000	0.05480	0.71615	0.00445
Q291C2	8840.000	0.06192	0.70264	0.00527
Q291C3	12373.000	0.05907	0.69513	0.00450
		0.05860 AVG	0.70464 AVG	0.00000 AVG
		0.003583 SD	0.010650 SD	0.000000 SD
		6.114632 %RSD	1.511481 %RSD	0.000000 %RSD

Q291D1	10756.000	0.07059	0.67079	0.00860
Q291D2	16504.000	0.07568	0.80671	0.01446
Q291D3	14907.000	0.06529	0.67883	0.00700
		0.07052 AVG	0.71878 AVG	0.01002 AVG
		0.005195 SD	0.076259 SD	0.003926 SD
		7.366718 %RSD	10.609553 %RSD	39.180477 %RSD

Q291E1	16118.000	0.06380	0.65242	0.00384
Q291E2	10390.000	0.06043	0.65891	0.00549
Q291E3	13367.000	0.06606	0.67228	0.00630
		0.06343 AVG	0.66121 AVG	0.00507 AVG
		0.002835 SD	0.010126 SD	0.001792 SD
		4.468955 %RSD	1.531494 %RSD	35.356819 %RSD

Q291F1	8801.000	0.06531	0.75141	0.00567
Q291F2	10838.000	0.06429	0.69118	0.00521
Q291F3	13483.000	0.06356	0.69413	0.00462
		0.06439 AVG	0.71224 AVG	0.00000 AVG
		0.000881 SD	0.033955 SD	0.000000 SD
		1.368083 %RSD	4.767387 %RSD	0.000000 %RSD

Q291G1	13510.000	0.08798	0.56236	0.00435
Q291G2	8610.000	0.08315	0.55705	0.00522
Q291G3	7962.000	0.08027	0.50655	0.00510

0. 00383 AVG	0. 54856 AVG	0. 00000 AVG
0. 003849 SD	0. 011724 SD	0. 000000 SD
4. 591082 %RSD	3. 522066 %RSD	0. 000000 %RSD

Q291H1 11589. 000  
Q291H2 10350. 000  
Q291H3 9178. 000

0. 07989	0. 58354	<	0. 00470
0. 08511	0. 58854	<	0. 00509
0. 07992	0. 56616	<	0. 00513

0. 08141 AVG	0. 57941 AVG	0. 00000 AVG
0. 003224 SD	0. 011746 SD	0. 000000 SD
3. 960277 %RSD	2. 027190 %RSD	0. 000000 %RSD

Q291I1 13041. 000  
Q291I2 11122. 000  
Q291I3 12805. 000

0. 08216	0. 54951	<	0. 00431
0. 08464	0. 54263	<	0. 00456
0. 08302	0. 55404	<	0. 00436

0. 08327 AVG	0. 54073 AVG	0. 00000 AVG
0. 001259 SD	0. 005748 SD	0. 000000 SD
1. 511782 %RSD	1. 047509 %RSD	0. 000000 %RSD

S626G 9395. 000  
S626H 7786. 000  
S626I 9322. 000

0. 07919	0. 71423	<	0. 00565
0. 08519	0. 70992	<	0. 00643
0. 08376	0. 72151	<	0. 00588

0. 08271 AVG	0. 71522 AVG	0. 00000 AVG
0. 003136 SD	0. 005860 SD	0. 000000 SD
3. 791159 %RSD	0. 819277 %RSD	0. 000000 %RSD

(TI)TITLE: 91119065 QY RF LEAD  
 (LN)LIBRARY:  
 (SA)SAMPLE TIME: 8JAN80 1048:00  
 (SE)STD ENERGY TOLERANCE: 2.00  
 (UE)UNK ENERGY TOLERANCE: 2.00  
 (TF)THERMAL FLUX: 0.0000E-01  
 (EF)EPITHERMAL FLUX: 0.0000E-01  
 (FF)FAST FLUX: 0.0000E-01  
 (QU)UNITS: UG

	ELÉMENT	ENERGY	HALF-LIFE	SEC
1	%-COPPER	511.00	1.2000E 01 H	4.6000E 04
2	%-ANTIMONY	564.09	2.7200E 00 D	2.3501E 05
3	%-ARSENIC	657.41	2.6300E 01 H	9.4600E 04

# STANDARD SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626D	9268.00	FB11 .A01	100.0	100000.0
2	S626E	10383.00	FB11 .A02	100.0	100000.0
3	S626F	11142.00	FB11 .A03	100.0	100000.0
4	S604D	7500.00	FB11 .A04	100.0	100000.0
5	S604E	8555.00	FB11 .A05	100.0	100000.0
6	S604F	9037.00	FB11 .A06	100.0	100000.0

STD: 1 S626D FILE= FB11 .A01

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 2 S626E FILE= FB11 .A02

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 3 S626F FILE= FB11 .A03

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	7.8000E-02	0.0000E-01
2	%-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	%-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 4 S604D FILE= FB11 .A04

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 5 S604E FILE= FB11 .A05



	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511. 00	0. 0000E-01	0. 0000E-01
2	%-ANTIMONY	564. 09	0. 0000E-01	0. 0000E-01
3	%-ARSENIC	657. 41	1. 0000E-01	0. 0000E-01

STD: 6 S604F

FILE= FB11. .A06

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511. 00	0. 0000E-01	0. 0000E-01
2	%-ANTIMONY	564. 09	0. 0000E-01	0. 0000E-01
3	%-ARSENIC	657. 41	1. 0000E-01	0. 0000E-01

# UNKNOWN SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626D	9268. 00	FB11 .A01	100. 0	100000. 0
2	S626E	10383. 00	FB11 .A02	100. 0	100000. 0
3	S626F	11142. 00	FB11 .A03	100. 0	100000. 0
4	S604D	7500. 00	FB11 .A04	100. 0	100000. 0
5	S604E	8555. 00	FB11 .A05	100. 0	100000. 0
6	S604F	9037. 00	FB11 .A06	100. 0	100000. 0
7	Q225A	10289. 00	FB11 .A07	100. 0	100000. 0
8	Q225B	11117. 00	FB11 .A08	100. 0	100000. 0
9	Q225C	11304. 00	FB11 .A09	100. 0	100000. 0
10	Q225D	7635. 00	FB11 .A10	100. 0	100000. 0
11	Q225E	13545. 00	FB11 .A11	100. 0	100000. 0
12	Q225F	9443. 00	FB11 .A12	100. 0	100000. 0
13	Q225G	11742. 00	FB11 .A13	100. 0	100000. 0
14	Q225H	9156. 00	FB11 .A14	100. 0	100000. 0
15	Q225I	9361. 00	FB11 .A15	100. 0	100000. 0
16	Q225J	11008. 00	FB11 .A16	100. 0	100000. 0
17	Q225K	8062. 00	FB11 .A17	100. 0	100000. 0
18	Q225L	8081. 00	FB11 .A18	100. 0	100000. 0
19	Q225M	11447. 00	FB11 .A19	100. 0	100000. 0
20	Q225N	9414. 00	FB11 .A20	100. 0	100000. 0
21	Q225O	9191. 00	FB11 .A21	100. 0	100000. 0
22	Q225P	8375. 00	FB11 .A22	100. 0	100000. 0
23	Q225Q	10157. 00	FB11 .A23	100. 0	100000. 0
24	Q225R	9949. 00	FB11 .A24	100. 0	100000. 0
25	Q225S	9766. 00	FB11 .A25	100. 0	100000. 0
26	Q2525T	12870. 00	FB11 .A26	100. 0	100000. 0
27	Q302A	11193. 00	FB11 .A27	100. 0	100000. 0
28	Q302B	10197. 00	FB11 .A28	100. 0	100000. 0
29	Q302C	6789. 00	FB11 .A29	100. 0	100000. 0
30	Q302D	8867. 00	FB11 .A30	100. 0	100000. 0
31	Q302E	9487. 00	FB11 .A31	100. 0	100000. 0
32	Q302F	9103. 00	FB11 .A32	100. 0	100000. 0
33	Q302G	8228. 00	FB11 .A33	100. 0	100000. 0
34	Q302H	7845. 00	FB11 .A34	100. 0	100000. 0
35	Q302I	12103. 00	FB11 .A35	100. 0	100000. 0
36	Q302J	9028. 00	FB11 .A36	100. 0	100000. 0
37	Q302K	7873. 00	FB11 .A37	100. 0	100000. 0
38	Q302L	11796. 00	FB11 .A38	100. 0	100000. 0
39	Q302M	10897. 00	FB11 .A39	100. 0	100000. 0
40	Q302N	12074. 00	FB11 .A40	100. 0	100000. 0
41	Q302O	10306. 00	FB11 .A41	100. 0	100000. 0
42	Q302P	11616. 00	FB11 .A42	100. 0	100000. 0
43	Q302Q	15686. 00	FB11 .A43	100. 0	100000. 0
44	Q302R	13426. 00	FB11 .A44	100. 0	100000. 0
45	Q302S	9244. 00	FB11 .A45	100. 0	100000. 0
46	Q302T	11534. 00	FB11 .A46	100. 0	100000. 0
47	Q291A1	12499. 00	FB11 .A47	100. 0	100000. 0
48	Q291A2	15826. 00	FB11 .A48	100. 0	100000. 0

49	Q291A3	8756.00	FBI1	.A49	100.0	100000.0
50	Q291B1	13440.00	FBI1	.A50	100.0	100000.0
51	Q291B2	14346.00	FBI1	.A51	100.0	100000.0
52	Q291B3	9441.00	FBI1	.A52	100.0	100000.0
53	Q291C1	14763.00	FBI1	.A53	100.0	100000.0
54	Q291C2	8840.00	FBI1	.A54	100.0	100000.0
55	Q291C3	12373.00	FBI1	.A55	100.0	100000.0
56	Q291D1	10756.00	FBI1	.A56	100.0	100000.0
57	Q291D2	16584.00	FBI1	.A57	100.0	100000.0
58	Q291D3	14907.00	FBI1	.A58	100.0	100000.0
59	Q291E1	16118.00	FBI1	.A59	100.0	100000.0
60	Q291E2	10390.00	FBI1	.A60	100.0	100000.0
61	Q291E3	13367.00	FBI1	.A61	100.0	100000.0
62	Q291F1	8801.00	FBI1	.A62	100.0	100000.0
63	Q291F2	10838.00	FBI1	.A63	100.0	100000.0
64	Q291F3	13483.00	FBI1	.A64	100.0	100000.0
65	Q291G1	13510.00	FBI1	.A65	100.0	100000.0
66	Q291G2	8610.00	FBI1	.A66	100.0	100000.0
67	Q291G3	7862.00	FBI1	.A67	100.0	100000.0
68	Q291H1	11589.00	FBI1	.A68	100.0	100000.0
69	Q291H2	10350.00	FBI1	.A69	100.0	100000.0
70	Q291H3	9178.00	FBI1	.A70	100.0	100000.0
71	Q291I1	13041.00	FBI1	.A71	100.0	100000.0
72	Q291I2	11122.00	FBI1	.A72	100.0	100000.0
73	Q291I3	12805.00	FBI1	.A73	100.0	100000.0
74	S626G	9395.00	FBI1	.A74	100.0	100000.0
75	S626H	7786.00	FBI1	.A75	100.0	100000.0
76	S626I	9322.00	FBI1	.A76	100.0	100000.0

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 11:52:08 AM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S626D  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 9268.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1028:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.08	9276.	4313.	2.89	1022.58	1012	23	1.546E 01	1.4	2.51E 00
2	1	564.24	140517.	5238.	1.96	1128.82	1120	18	2.342E 02	0.3	1.66E 02
3	1	602.89	7961.	955.	2.03	1206.05	1196	20	1.327E 01	1.2	6.14E 00
4	1	646.10	529.	856.	1.95	1292.40	1283	25	8.809E-01	9.0	1.50E 00
5	1	668.65	196.	358.	3.00	1337.47	1334	11	3.267E-01	15.4	5.48E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	9276.	7.8000E-02	0.0000E-01	7.7425E-02	1.1167E-03
%-ANTIMONY	564.1	140517.	7.2000E-01	0.0000E-01	4.5166E-02	1.2490E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 11:53:17 AM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S626F  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 10383.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1039:08 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.06	9778.	6600.	2.88	1022.53	1013	30	1.630E 01	1.6	2.37E 00
2	1	564.23	152136.	6300.	1.96	1128.00	1120	21	2.536E 02	0.3	1.41E 02
3	1	602.90	8625.	1337.	2.01	1206.06	1194	22	1.437E 01	1.2	4.54E 00
4	1	646.08	662.	490.	2.45	1292.36	1284	14	1.104E 00	6.1	4.07E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	9778.	7.8000E-02	0.0000E-01	7.3546E-02	1.1401E-03
%-ANTIMONY	564.1	152136.	7.2000E-01	0.0000E-01	4.3731E-02	1.1667E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 11:54:23 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 5626F  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 11142.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1049:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	511.08	11114.	5083.	2.84	1022.57	1013	23	1.852E 01	1.3	2.26E 00
2	2	560.14	1710.	1347.	2.22	1120.62	1107	39	2.850E 00	3.9	9.76E 01
3	2	564.23	162455.	1013.	1.97	1128.80	1107	39	2.708E 02	0.2	
4	1	602.91	9086.	1415.	1.99	1206.09	1194	23	1.514E 01	1.2	7.33E 00
5	1	646.10	509.	816.	1.86	1292.41	1282	17	8.484E-01	9.1	2.94E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	11114.	7.8000E-02	0.0000E-01	7.8641E-02	1.0322E-03
%-ANTIMONY	564.1	162455.	7.2000E-01	0.0000E-01	4.3598E-02	1.0884E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 11:55:24 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S604D  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 7500.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 10JAN80 851:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 393. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 374. SEC \* NBR ITERATIONS: 10.  
 \*

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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	3	559.43	7726.	1738.	2.41	1119.19	1110	38	2.066E 01	1.4	5.30E 01
2	3	564.26	131933.	1114.	1.97	1128.84	1110	38	3.528E 02	0.3	
3	1	602.92	9282.	1160.	1.99	1206.12	1195	20	2.482E 01	1.2	6.23E 00
4	1	646.03	642.	514.	2.20	1292.27	1286	13	1.717E 00	6.4	2.11E 00
5	1	657.25	779.	488.	2.34	1314.69	1306	16	2.083E 00	5.4	3.32E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	779.	1.0000E-01	0.0000E-01	9.3647E-03	5.0351E-04

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 \*\*\*\*\* 10 JAN 1980 11:56:27 AM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 5604E  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 8555.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

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 \*  
 ACQUISITION DATE: 9JAN80 11:11:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 643. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	510.97	708.	5352.	2.72	1022.35	1016	12	1.179E 00	15.1	2.05E 00
2	2	559.33	24299.	3405.	2.31	1119.00	1108	34	4.050E 01	0.7	1.34E 02
3	2	564.22	308371.	2546.	1.98	1128.76	1108	34	5.140E 02	0.2	
4	1	602.88	17488.	3102.	2.00	1206.04	1195	19	2.915E 01	0.9	1.05E 01
5	1	645.93	1080.	1874.	1.96	1292.06	1282	17	1.800E 00	6.4	1.23E 00
6	1	657.26	2158.	2427.	2.05	1314.72	1307	23	3.596E 00	3.9	4.51E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1. SIGMA)	CONSTANT	ERROR (1. SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	2158.	1.0000E-01	0.0000E-01	8.0115E-03	3.1087E-04

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 11:57:32 AM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S604F  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 9037.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1122:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 643. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	3	559.34	24374.	3686.	2.35	1119.02	1108	33	4.062E 01	0.7	1.46E 02
2	3	564.22	303379.	2473.	1.99	1128.77	1108	33	5.056E 02	0.2	
3	1	602.88	17505.	2935.	2.02	1206.03	1194	21	2.917E 01	0.9	8.03E 00
4	1	646.05	1043.	1700.	1.97	1292.31	1285	16	1.738E 00	6.4	8.90E-01
5	1	657.25	1955.	1644.	1.96	1314.69	1307	16	3.258E 00	3.7	1.47E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1. SIGMA)	CONSTANT	ERROR (1. SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	1955.	1.0000E-01	0.0000E-01	6.9040E-03	2.5572E-04



# SUMMARY OF STANDARD CONSTANTS:

## 1. ELEMENT Z-COPPER AT 511.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626D	7.8000E-02	7.7425E-02	1.1167E-03
S626E	7.8000E-02	7.3546E-02	1.1401E-03
S626F	7.8000E-02	7.8641E-02	1.0322E-03
<hr/>			
MEAN CONSTANT,	3 STDS:	7.6691E-02	6.3123E-04

## 2. ELEMENT Z-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626D	7.2000E-01	4.5166E-02	1.2490E-04
S626E	7.2000E-01	4.3731E-02	1.1667E-04
S626F	7.2000E-01	4.3598E-02	1.0884E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	4.4095E-02	6.7118E-05

## 3. ELEMENT Z-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604D	1.0000E-01	9.3647E-03	5.0351E-04
S604E	1.0000E-01	8.0115E-03	3.1087E-04
S604F	1.0000E-01	6.9040E-03	2.5572E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	7.6194E-03	1.8385E-04

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 \*\*\*\*\* 10 JAN 1980 11:59:04 AM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 5626D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9268.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1028:37 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL L1B1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	4313.	9276.	0.0787	0.0013	1.7
Z-ANTIMONY	564.2	5238.	140517.	0.7375	0.0023	0.3
Z-ARSENIC	657.4	535.	0. <	0.0049	NOT DETECTABLE	

1009:	196.	211.	193.	204.	202.	194.	252.	292.	369.
1018:	492.	760.	1005.	1419.	1684.	1668.	1469.	1138.	729.
1027:	451.	327.	214.	195.	211.	196.	184.	161.	192.

1117:	378.	421.	471.	508.	424.	567.	694.	1195.	3401.
1126:	9024.	18940.	29327.	34021.	27517.	14047.	4002.	785.	165.
1135:	119.	100.	86.	99.	85.	72.	86.	85.	59.

1301:	39.	24.	43.	34.	40.	40.	35.	36.	31.
1310:	40.	34.	38.	52.	53.	56.	50.	45.	29.
1319:	41.	35.	31.	34.	37.	22.	39.	34.	35.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	9276.	4313.	2.89	1022.58	1012	23	1.546E 01	1.4
2	1	564.24	140517.	5238.	1.96	1128.82	1120	18	2.342E 02	0.3
3	1	602.89	7961.	955.	2.03	1206.05	1196	20	1.327E 01	1.2
4	1	646.10	529.	856.	1.95	1292.40	1283	25	8.809E-01	9.0
5	1	668.65	196.	358.	3.00	1337.47	1334	11	3.267E-01	15.4

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 \*\*\*\*\* 10 JAN 1980 12:00:19 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S626E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10383.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1039:08 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 2600179 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	6600.	9778.	0.0748	0.0013	1.8
Z-ANTIMONY	564.2	6300.	152136.	0.7141	0.0022	0.3
Z-ARSENIC	657.4	569.	0. <	0.0045	NOT DETECTABLE	

1009:	214.	228.	257.	240.	231.	240.	263.	313.	390.
1018:	483.	811.	1157.	1528.	1808.	1780.	1577.	1209.	771.
1027:	491.	332.	278.	207.	222.	211.	181.	187.	188.

1117:	419.	491.	501.	524.	518.	551.	765.	1389.	3777.
1126:	9946.	20799.	31916.	37011.	29408.	14940.	4485.	832.	196.
1135:	139.	126.	111.	98.	97.	92.	83.	99.	99.

1301:	36.	30.	29.	44.	31.	31.	55.	31.	42.
1310:	33.	36.	43.	53.	55.	56.	45.	49.	35.
1319:	45.	34.	43.	41.	31.	27.	42.	21.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	9778.	6600.	2.88	1022.53	1013	30	1.630E 01	1.6
2	1	564.23	152136.	6300.	1.96	1128.80	1120	21	2.536E 02	0.3
3	1	602.90	8625.	1337.	2.01	1206.06	1194	22	1.437E 01	1.2
4	1	646.08	662.	490.	2.45	1292.36	1284	14	1.104E 00	6.1

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 \*\*\*\*\* 10 1980 12:01:26 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S626F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11142.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1049:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL I-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 260CT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
Z-COPPER	511.1	5083.	11114.	0.0800	0.0012	1.5
Z-ANTIMONY	564.2	1013.	162455.	0.7119	0.0021	0.3
Z-ARSENIC	657.4	630.	0. <	0.0044	NOT DETECTABLE	

1009:	260.	236.	252.	268.	247.	240.	272.	354.	416.
1018:	618.	874.	1267.	1718.	2021.	2055.	1779.	1299.	899.
1027:	601.	383.	282.	245.	217.	226.	204.	200.	198.

1117:	429.	507.	626.	574.	568.	609.	777.	1458.	3906.
1126:10547.	21863.	33880.	38733.	31494.	15699.	4501.	867.	224.	
1135:	150.	117.	99.	100.	117.	93.	93.	95.	92.

1301:	38.	36.	36.	47.	58.	38.	43.	38.	35.
1310:	31.	34.	52.	55.	60.	77.	57.	52.	52.
1319:	49.	35.	41.	40.	34.	45.	31.	43.	42.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR
1	1	511.08	11114.	5083.	2.84	1022.57	1013	23	1.852E 01	1.3
2	2	560.14	1710.	1347.	2.22	1120.62	1107	39	2.850E 00	3.9
3	2	564.23	162455.	1013.	1.97	1128.80	1107	39	2.708E 02	0.2
4	1	602.91	9086.	1415.	1.99	1206.09	1194	23	1.514E 01	1.2
5	1	646.10	509.	816.	1.86	1292.41	1282	17	8.484E-01	9.1

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 \*\*\*\*\* 10 1980 12:02:34 PM \*\*\*\*\*  
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91119065 QY KF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 5604D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7500.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.7AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 10JAN80 851:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 393. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 374. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2541.	0. <	0.00134	NOT DETECTABLE	
%-ANTIMONY	564.3	1114.	131933.	1.7405	0.0055	0.3
%-ARSENIC	657.3	488.	779.	0.1229	0.0072	5.9

1009:	171.	210.	199.	200.	194.	202.	184.	186.	192.
1018:	184.	210.	192.	207.	202.	240.	193.	201.	194.
1027:	149.	191.	179.	169.	157.	175.	187.	170.	189.

1117:	1038.	1507.	1753.	1598.	1044.	611.	647.	1117.	2960.
1126:	8269.	17383.	27126.	31943.	25909.	13376.	4219.	814.	216.
1135:	116.	128.	120.	117.	99.	96.	97.	89.	97.

1301:	33.	44.	40.	36.	36.	31.	38.	42.	33.
1310:	52.	60.	103.	121.	159.	202.	165.	73.	46.
1319:	39.	39.	26.	29.	41.	36.	28.	41.	29.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	3	559.43	7726.	1738.	2.41	1119.19	1110	38	2.066E 01	1.4
2	3	564.26	131933.	1114.	1.97	1128.84	1110	38	3.528E 02	0.3
3	1	602.92	9282.	1160.	1.99	1206.12	1195	70	2.482E 01	1.2
4	1	646.03	642.	514.	2.20	1292.27	1286	13	1.717E 00	6.4
5	1	657.25	779.	488.	2.34	1314.69	1306	16	2.083E 00	5.4

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 \*\*\*\*\* 10 1980 12:03:43 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S604E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8555.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*

ACQUISITION DATE: 9JAN80 1111:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 643. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GCL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 260079 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
Z-COPPER	511.0	5352.	708.	0.0068	0.0010	15.1
Z-ANTIMONY	564.2	2546.	308371.	1.7667	0.0042	0.2
Z-ARSENIC	657.3	2427.	2158.	0.1051	0.0048	4.6

1009:	489.	487.	471.	434.	452.	427.	480.	398.	481.
1018:	476.	489.	496.	511.	574.	589.	518.	471.	498.
1027:	449.	457.	417.	445.	397.	428.	433.	391.	417.

1117:	3253.	4906.	5617.	4675.	2934.	1654.	1581.	2759.	7599.
1126:	20676.	42880.	64348.	73666.	58599.	29265.	8676.	1832.	574.
1135:	426.	359.	339.	312.	279.	279.	274.	277.	261.

1301:	106.	118.	131.	117.	101.	77.	109.	111.	92.
1310:	132.	135.	266.	394.	561.	566.	518.	293.	167.
1319:	86.	93.	86.	96.	106.	87.	91.	106.	81.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.97	708.	5352.	2.72	1022.35	1016	12	1.179E 00	15.1
2	2	559.33	24299.	3405.	2.31	1119.00	1108	34	4.050E 01	0.7
3	2	564.22	308371.	2546.	1.98	1128.76	1108	34	5.140E 02	0.2
4	1	602.88	17488.	3102.	2.00	1206.04	1195	19	2.915E 01	0.9
5	1	645.93	1080.	1874.	1.96	1292.06	1282	17	1.800E 00	6.4
6	1	657.26	2158.	2427.	2.05	1314.72	1307	23	3.596E 00	3.9

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 \*\*\*\*\* 10 J 1980 12:04:54 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 5604F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9037.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1122:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 643. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	6284.	0. <	0.0034	NOT DETECTABLE	
Z-ANTIMONY	564.2	2473.	303379.	1.6485	0.0039	0.2
Z-ARSENIC	657.3	1644.	1955.	0.0906	0.0040	4.4

1009:	474.	460.	508.	431.	425.	475.	444.	441.	467.
1010:	437.	486.	508.	508.	553.	551.	513.	498.	452.
1027:	445.	425.	394.	419.	387.	411.	416.	433.	413.
1117:	3254.	4816.	5468.	4728.	3009.	1660.	1603.	2815.	7629.
1126:	20469.	41726.	63293.	72070.	57953.	28879.	8750.	1792.	542.
1135:	396.	312.	342.	299.	288.	228.	322.	262.	261.
1301:	105.	116.	80.	108.	91.	114.	112.	88.	104.
1310:	100.	176.	228.	354.	545.	568.	451.	266.	163.
1319:	106.	103.	99.	91.	94.	80.	96.	98.	115.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	3	559.34	24374.	3686.	2.35	1119.02	1108	33	4.062E 01	0.7
2	3	564.22	303379.	2473.	1.99	1128.77	1108	33	5.056E 02	0.2
3	1	602.88	17505.	2935.	2.02	1206.03	1194	21	2.917E 01	0.9
4	1	646.05	1043.	1700.	1.97	1292.31	1285	16	1.738E 00	6.4
5	1	657.25	1955.	1644.	1.96	1314.69	1307	16	3.258E 00	3.7

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 \*\*\*\*\* 10 1980 12:06:03 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10289.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1132:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 645. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.3	6253.	1331.	0.0108	0.0010	8.9
Z-ANTIMONY	564.2	2719.	236749.	1.1321	0.0029	0.3
Z-ARSENIC	657.2	2819.	9146.	0.3741	0.0103	2.8

1009:	458.	482.	438.	502.	460.	484.	529.	441.	503.
1018:	513.	540.	593.	614.	675.	643.	586.	660.	529.
1027:	487.	469.	485.	443.	461.	456.	434.	435.	432.

1117:	12030.	18726.	21463.	17380.	9391.	3506.	1729.	2373.	6081.
1126:	16236.	33237.	50104.	55974.	44535.	22561.	6859.	1438.	551.
1135:	406.	356.	332.	338.	325.	299.	286.	327.	323.

1301:	152.	126.	145.	146.	142.	145.	138.	166.	168.
1310:	228.	410.	812.	1425.	2053.	2224.	1809.	925.	359.
1319:	177.	153.	131.	126.	105.	106.	134.	115.	112.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.33	1331.	6253.	3.45	1023.00	1016	13	2.219E 00	8.8
2	2	559.25	88757.	3144.	1.99	1118.83	1107	35	1.479E 02	0.3
3	2	564.21	236749.	2719.	1.99	1128.74	1107	35	3.946E 02	0.2
4	1	602.88	13207.	3507.	2.00	1206.02	1196	21	2.201E 01	1.1
5	1	646.01	940.	1452.	2.06	1292.22	1287	11	1.567E 00	6.6
6	1	657.25	9146.	2819.	2.03	1314.68	1305	21	1.524E 01	1.3
7	1	665.59	527.	1494.	1.95	1331.35	1326	12	8.785E-01	11.2



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 \*\*\*\*\* 10 1980 12:07:15 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0225B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11117.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1143:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4166.	1659.	0.0126	0.0008	6.1
%-ANTIMONY	564.2	1487.	154369.	0.6845	0.0020	0.3
%-ARSENIC	657.3	1496.	5128.	0.1951	0.0058	3.0

1009:	286.	278.	293.	273.	287.	309.	267.	288.	306.
1018:	342.	370.	457.	510.	527.	562.	459.	425.	380.
1027:	327.	296.	262.	273.	280.	266.	246.	250.	271.

1117:	6664.	10162.	11828.	9909.	5454.	2102.	1062.	1525.	3870.
1126:	10332.	21276.	32450.	36732.	29380.	14872.	4537.	886.	260.
1135:	181.	164.	174.	158.	164.	142.	156.	149.	154.

1301:	71.	69.	74.	69.	69.	82.	72.	68.	91.
1310:	109.	224.	425.	754.	1215.	1213.	1006.	528.	220.
1319:	92.	58.	89.	60.	64.	56.	70.	59.	69.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	1659.	4166.	2.92	1022.41	1015	15	2.765E 00	6.0
2	2	559.27	49656.	1798.	2.03	1118.87	1107	35	8.276E 01	0.5
3	2	564.22	154369.	1487.	1.98	1128.77	1107	35	2.573E 02	0.3
4	1	602.89	8654.	1855.	2.00	1206.05	1194	20	1.442E 01	1.3
5	1	645.98	652.	910.	2.04	1292.17	1286	13	1.087E 00	7.6
6	1	657.25	5128.	1496.	2.01	1314.69	1304	22	8.547E 00	1.8
7	1	665.44	296.	767.	1.95	1331.05	1326	11	4.940E-01	14.4

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 \*\*\*\*\* 10 1980 12:08:29 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11304.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1154:35 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 627. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	4072.	2101.	0.0158	0.0008	4.9
%-ANTIMONY	564.2	1401.	148478.	0.6487	0.0020	0.3
%-ARSENIC	657.3	2579.	4767.	0.1792	0.0057	3.2

1009:	270.	287.	306.	278.	261.	250.	254.	276.	297.
1018:	303.	410.	451.	570.	533.	526.	519.	418.	395.
1027:	281.	283.	274.	257.	257.	276.	256.	268.	261.

1117:	6285.	9727.	11551.	9368.	5284.	1977.	1033.	1432.	3771.
1126:	9715.	20057.	31048.	35481.	28578.	14480.	4261.	924.	249.
1135:	158.	162.	166.	153.	150.	157.	149.	157.	151.

1301:	64.	80.	63.	79.	65.	90.	82.	72.	94.
1310:	106.	221.	393.	733.	1108.	1182.	1003.	522.	196.
1319:	86.	69.	55.	62.	48.	72.	66.	63.	62.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.92	2101.	4072.	3.26	1022.26	1015	16	3.502E 00	4.8
2	2	559.27	47670.	1701.	2.02	1118.87	1108	30	7.945E 01	0.5
3	2	564.23	148478.	1401.	1.98	1128.79	1108	30	2.475E 02	0.3
4	1	602.88	8517.	2509.	1.99	1206.03	1197	26	1.419E 01	1.4
5	1	645.96	540.	1068.	1.90	1292.13	1286	14	8.993E-01	9.6
6	1	657.28	4767.	2579.	2.00	1314.74	1305	27	7.944E 00	2.1
7	1	665.91	29.	1063.	0.62	1332.00	1331	13	4.843E-02	****

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 \*\*\*\*\* 10 JAN 1980 12:09:39 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7635.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1205:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 680. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	11203.	1397.	0.0157	0.0017	11.1
Z-ANTIMONY	564.2	5901.	430035.	2.7872	0.0060	0.2
Z-ARSENIC	657.2	4743.	14908.	0.8336	0.0220	2.6

1009:	888.	865.	849.	924.	782.	882.	852.	870.	826.
1010:	938.	945.	1010.	1052.	1128.	1076.	1044.	987.	842.
1027:	881.	832.	811.	850.	787.	770.	783.	855.	793.

1117:	20260.	30794.	34776.	27992.	14811.	5912.	3214.	4947.	12498.
1126:	31413.	61840.	91866.	100795.	78904.	39313.	12190.	3258.	1373.
1135:	1061.	956.	918.	794.	819.	736.	818.	702.	760.

1301:	289.	291.	274.	276.	298.	300.	273.	302.	339.
1310:	419.	651.	1397.	2402.	3512.	3631.	2944.	1632.	640.
1319:	335.	277.	269.	273.	245.	277.	265.	267.	260.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.86	1397.	11203.	2.69	1022.12	1015	13	2.328E 00	11.0
2	2	559.22	144968.	6271.	2.02	1118.78	1107	34	2.416E 02	0.3
3	2	564.18	430035.	5901.	2.01	1128.69	1107	34	7.167E 02	0.2
4	1	602.86	24445.	7158.	2.04	1205.99	1197	19	4.074E 01	0.8
5	1	646.01	1525.	5066.	2.05	1292.22	1281	17	2.542E 00	7.1
6	1	657.24	14908.	4743.	2.02	1314.67	1306	17	2.485E 01	1.0
7	1	665.54	703.	3124.	1.74	1331.26	1326	11	1.171E 00	11.9

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 \*\*\*\*\* 10 1980 12:10:49 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13545.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1216:49 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	8256.	1888.	0.0121.	0.0009	7.2
%-ANTIMONY	564.2	3325.	274376.	1.0044	0.0025	0.2
%-ARSENIC	657.3	2420.	9222.	0.2921	0.0080	2.7

1009:	550.	511.	538.	512.	549.	504.	538.	531.	576.
1018:	592.	622.	687.	756.	845.	818.	766.	707.	609.
1027:	569.	535.	507.	504.	491.	480.	476.	472.	473.

1117:	12134.	18289.	21542.	17360.	9460.	3672.	1996.	2845.	7170.
1126:	18851.	38532.	57610.	65206.	51716.	26021.	7976.	1839.	676.
1135:	501.	449.	416.	419.	374.	366.	376.	404.	404.

1301:	155.	136.	191.	151.	162.	162.	162.	161.	198.
1310:	217.	381.	822.	1475.	2064.	2230.	1819.	1020.	372.
1319:	178.	150.	154.	127.	153.	145.	138.	147.	146.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	1888.	8256.	2.83	1022.53	1014	16	3.146E 00	7.2
2	2	559.25	88389.	3765.	2.01	1118.84	1108	34	1.473E 02	0.4
3	2	564.21	274376.	3325.	1.99	1128.75	1108	34	4.573E 02	0.2
4	1	602.86	15251.	4155.	2.04	1206.00	1194	20	2.542E 01	1.0
5	1	645.95	1053.	2544.	2.38	1292.11	1285	16	1.755E 00	7.4
6	1	657.26	9222.	2420.	2.05	1314.70	1306	16	1.537E 01	1.3
7	1	665.64	423.	1869.	1.56	1331.46	1327	12	7.052E-01	15.2

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 12:11:59 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9443.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1227:51 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 637. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER	511.1	5170.	1282.	0.0119	0.0010	8.4
X-ANTIMONY	564.2	2182.	206462.	1.0862	0.0029	0.3
X-ARSENIC	657.3	1823.	6921.	0.3160	0.0090	2.8

1009:	419.	399.	378.	383.	378.	352.	385.	358.
1018:	423.	427.	481.	532.	571.	612.	534.	481.
1027:	395.	367.	380.	344.	358.	372.	370.	336.

1117:	8988.	13767.	16117.	13535.	7073.	2700.	1525.	2055.	5360.
1126:	13953.	28460.	43019.	49448.	39397.	19629.	6032.	1257.	420.
1135:	282.	287.	243.	256.	229.	204.	236.	228.	237.

1304:	122.	102.	99.	107.	112.	108.	112.	108.	124.
1310:	158.	309.	574.	1087.	1510.	1756.	1357.	757.	292.
1319:	131.	92.	87.	101.	108.	90.	103.	110.	100.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	1282.	5170.	2.80	1022.53	1015	14	2.137E 00	8.4
2	2	559.26	67131.	2595.	2.01	1118.86	1107	35	1.119E 02	0.4
3	2	564.22	206462.	2182.	1.98	1128.77	1107	35	3.441E 02	0.2
4	1	602.89	12326.	2484.	1.99	1206.04	1196	18	2.054E 01	1.1
5	1	646.06	897.	1583.	2.34	1292.33	1284	15	1.496E 00	7.1
6	1	657.27	6921.	1823.	2.02	1314.73	1306	17	1.153E 01	1.5
7	1	665.70	422.	1261.	1.88	1331.57	1325	13	7.041E-01	12.8

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 \*\*\*\*\* 10 JAN 1980 12:13:09 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11742.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1238:41 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4286.	1629.	0.0123	0.0008	6.3
%-ANTIMONY	564.2	1843.	163164.	0.6917	0.0020	0.3
%-ARSENIC	657.3	1099.	5538.	0.2043	0.0059	2.9

1009:	267.	312.	301.	320.	277.	303.	296.	290.	327.
1018:	380.	384.	450.	501.	552.	519.	489.	451.	375.
1027:	310.	313.	276.	268.	302.	294.	309.	275.	249.

1117:	7218.	10967.	12930.	10608.	5751.	2174.	1115.	1639.	4204.
1126:	10826.	22310.	34189.	39276.	31216.	15817.	4618.	1014.	284.
1135:	216.	230.	178.	173.	162.	163.	149.	159.	172.

1301:	90.	80.	73.	75.	103.	85.	66.	85.	112.
1310:	128.	210.	452.	848.	1218.	1289.	1088.	631.	254.
1319:	96.	63.	74.	68.	75.	75.	61.	74.	63.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	1629.	4286.	3.00	1022.50	1015	15	2.716E 00	6.2
2	2	559.27	52747.	2409.	1.99	1118.87	1110	32	8.791E 01	0.5
3	2	564.23	163164.	1843.	1.98	1128.78	1110	32	2.719E 02	0.3
4	1	602.91	9595.	1928.	1.99	1206.09	1195	19	1.599E 01	1.2
5	1	645.99	703.	987.	2.13	1292.18	1286	12	1.171E 00	7.4
6	1	657.28	5538.	1099.	2.08	1314.75	1307	15	9.229E 00	1.6
7	1	665.42	294.	981.	2.14	1331.00	1326	12	4.905E-01	16.1

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:14:19 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9156.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1249:24 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3278.	1300.	0.0127	0.0009	6.9
%-ANTIMONY	564.2	1189.	125434.	0.6832	0.0022	0.3
%-ARSENIC	657.3	1008.	4308.	0.2048	0.0062	3.0

1009:	270.	213.	234.	241.	220.	204.	237.	236.	203.
1018:	265.	299.	332.	378.	439.	447.	393.	357.	289.
1027:	234.	231.	218.	215.	233.	236.	200.	206.	207.

1117:	5496.	8377.	9855.	8139.	4529.	1717.	791.	1168.	3127.
1126:	8205.	17016.	25972.	29880.	24166.	12355.	3696.	754.	183.
1135:	142.	128.	118.	119.	120.	105.	114.	111.	130.

1301:	43.	62.	40.	48.	59.	43.	70.	53.	67.
1310:	93.	159.	345.	653.	905.	1075.	845.	448.	179.
1319:	66.	44.	64.	50.	36.	54.	50.	54.	52.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	1300.	3278.	2.76	1022.62	1015	15	2.166E 00	6.8
2	2	559.27	40930.	1487.	2.01	1118.87	1108	34	6.822E 01	0.5
3	2	564.23	125434.	1189.	1.99	1128.80	1108	34	2.091E 02	0.3
4	1	602.92	7393.	1517.	2.03	1206.10	1195	21	1.232E 01	1.4
5	1	646.10	591.	724.	2.45	1292.39	1286	15	9.856E-01	7.6
6	1	657.28	4308.	1008.	2.02	1314.75	1304	21	7.180E 00	1.8
7	1	665.56	217.	702.	2.08	1331.28	1324	13	3.610E-01	18.6



\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:15:29 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 02251  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9361.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1259:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3135.	1230.	0.0119	0.0008	7.1
%-ANTIMONY	564.2	1069.	115038.	0.6140	0.0021	0.3
%-ARSENIC	657.2	975.	3731.	0.1743	0.0055	3.2

1009:	231.	202.	233.	246.	209.	217.	205.	212.	230.
1018:	249.	264.	320.	379.	400.	441.	398.	334.	279.
1027:	243.	208.	214.	200.	209.	191.	209.	204.	201.

1117:	4918.	7477.	8859.	7323.	4044.	1494.	742.	1083.	2863.
1126:	7500.	15524.	24133.	27792.	22044.	11174.	3470.	650.	205.
1135:	129.	111.	107.	102.	95.	98.	101.	103.	129.

1301:	55.	49.	57.	41.	50.	52.	63.	67.	70.
1310:	92.	142.	298.	616.	857.	907.	695.	379.	165.
1319:	72.	47.	45.	41.	48.	39.	43.	40.	59.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.15	1230.	3135.	2.61	1022.70	1015	15	2.050E 00	7.0
2	2	559.27	36778.	1332.	2.02	1118.87	1107	35	6.130E 01	0.5
3	2	564.23	115038.	1069.	1.97	1128.79	1107	35	1.917E 02	0.3
4	1	602.92	6902.	1316.	2.03	1206.12	1197	19	1.150E 01	1.4
5	1	645.99	503.	579.	2.29	1292.18	1286	13	8.379E-01	8.1
6	1	657.23	3731.	975.	2.00	1314.64	1303	20	6.218E 00	2.0
7	1	665.76	429.	875.	4.50	1331.70	1323	22	7.144E-01	10.9



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 \*\*\*\*\* 10 1980 12:16:42 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11008.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1310:32 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GEL1-8 \* LIBRARY: NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	4909.	1240.	0.0103	0.0009	8.5
Z-ANTIMONY	564.2	1530.	156393.	0.7112	0.0021	0.3
Z-ARSENIC	657.3	2569.	4877.	0.1946	0.0062	3.2

1009:	304.	280.	287.	245.	267.	275.	318.	291.	297.
1018:	317.	336.	420.	463.	506.	489.	449.	419.	360.
1027:	298.	311.	266.	263.	281.	250.	296.	269.	269.
1117:	6594.	10054.	11976.	9919.	5409.	2140.	1039.	1464.	3814.
1126:	10465.	21559.	32461.	37169.	30033.	15097.	4550.	981.	267.
1135:	193.	176.	171.	160.	172.	171.	154.	144.	162.
1301:	84.	67.	84.	73.	98.	84.	91.	98.	83.
1310:	110.	207.	425.	768.	1179.	1236.	989.	551.	199.
1319:	107.	67.	62.	81.	52.	56.	58.	74.	73.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	1240.	4909.	2.80	1022.55	1016	17	2.067E 00	8.5
2	2	559.28	49353.	1880.	2.01	1118.89	1107	32	8.225E 01	0.5
3	2	564.23	156393.	1530.	1.99	1128.78	1107	32	2.607E 02	0.3
4	1	602.89	8895.	1600.	1.98	1206.04	1198	16	1.482E 01	1.2
5	1	646.13	628.	926.	2.16	1292.47	1286	13	1.047E 00	7.9
6	1	657.26	4877.	2569.	1.95	1314.70	1307	25	8.129E 00	2.1

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 \*\*\*\*\* 10 1980 12:17:51 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8062.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1321:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3822.	1496.	0.0171	0.0011	6.4
%-ANTIMONY	564.2	1513.	163163.	1.0150	0.0030	0.3
%-ARSENIC	657.3	1190.	5492.	0.3007	0.0087	2.9

1009:	310.	284.	298.	314.	313.	316.	294.	285.	316.
1018:	286.	347.	427.	436.	479.	452.	443.	394.	381.
1027:	341.	307.	255.	258.	271.	299.	259.	282.	271.

1117:	6948.	10829.	12792.	10509.	5812.	2227.	1174.	1635.	4069.
1126:	10920.	22046.	34046.	39037.	31316.	15687.	4874.	978.	286.
1135:	208.	176.	195.	162.	143.	167.	129.	164.	172.

1301:	61.	77.	79.	76.	70.	84.	64.	75.	85.
1310:	112.	226.	441.	819.	1217.	1368.	1091.	574.	221.
1319:	98.	70.	75.	77.	63.	69.	75.	68.	63.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	1496.	3822.	3.67	1022.64	1016	14	2.493E 00	6.4
2	2	559.27	52902.	1895.	2.01	1118.88	1107	34	8.817E 01	0.5
3	2	564.23	163163.	1513.	1.98	1128.78	1107	34	2.719E 02	0.2
4	1	602.88	9224.	1895.	2.00	1206.02	1194	20	1.537E 01	1.2
5	1	646.02	614.	1112.	2.04	1292.24	1285	16	1.023E 00	8.7
6	1	657.28	5492.	1190.	2.00	1314.74	1307	17	9.153E 00	1.6
7	1	665.50	284.	708.	2.12	1331.17	1327	10	4.738E-01	14.5

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:18:59 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8081.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1331:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 749. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	21823.	0. <	0.0079	NOT DETECTABLE	
%-ANTIMONY	564.1	13302.	749966.	4.6641	0.0090	0.2
%-ARSENIC	657.1	11590.	24951.	1.3698	0.0353	2.6

1009:	1711.	1685.	1669.	1753.	1635.	1649.	1674.	1629.	1667.
1018:	1641.	1715.	1722.	1822.	1649.	1703.	1779.	1632.	1661.
1027:	1634.	1569.	1565.	1540.	1534.	1558.	1564.	1580.	1611.

1117:	37088.	52182.	55729.	42910.	23150.	9961.	6814.	11064.	27078.
1126:	62908.	116147.	162746.	170909.	128002.	62253.	20410.	6766.	3737.
1135:	3186.	2953.	2559.	2388.	2212.	2137.	2056.	1910.	2048.

1301:	707.	698.	697.	697.	692.	716.	720.	715.	802.
1310:	1043.	1622.	2851.	4649.	6117.	6042.	4629.	2592.	1269.
1319:	838.	744.	682.	666.	653.	686.	684.	674.	730.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.15	241170.	14763.	2.10	1118.64	1107	37	4.020E 02	0.2
2	2	564.11	749966.	13302.	2.05	1128.55	1107	37	1.250E 03	0.1
3	1	602.78	43511.	19071.	2.05	1205.84	1196	19	7.252E 01	0.7
4	1	645.98	2533.	8997.	1.91	1292.16	1287	12	4.222E 00	5.7
5	1	657.13	24951.	11590.	2.09	1314.45	1306	17	4.158E 01	0.9
6	1	665.28	1177.	7678.	1.89	1330.74	1326	11	1.961E 00	10.9

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 \*\*\*\*\* 10 1980 12:20:13 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11447.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1344:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL 1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	4658.	1393.	0.0114	0.0009	7.5
Z-ANTIMONY	564.2	1795.	173047.	0.7613	0.0022	0.3
Z-ARSENIC	657.3	1176.	5529.	0.2154	0.0063	2.9

1009:	316.	348.	326.	333.	340.	330.	304.	325.	347.
1018:	384.	360.	433.	512.	564.	553.	511.	441.	389.
1027:	353.	347.	301.	307.	303.	288.	257.	298.	305.

1117:	7235.	11185.	13066.	10638.	5813.	2226.	1215.	1682.	4254.
1126:	11462.	23544.	36267.	41216.	33200.	16995.	5210.	1103.	301.
1135:	224.	203.	180.	183.	195.	178.	145.	170.	183.

1301:	86.	95.	82.	97.	74.	78.	85.	78.	91.
1310:	137.	248.	462.	840.	1219.	1427.	1031.	576.	225.
1319:	99.	85.	63.	79.	81.	65.	62.	67.	72.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	1393.	4658.	2.59	1022.61	1015	15	2.321E 00	7.4
2	2	559.26	53827.	2083.	2.00	1118.86	1107	37	8.971E 01	0.4
3	2	564.23	173047.	1795.	1.98	1128.79	1107	37	2.884E 02	0.2
4	1	571.82	115.	1794.	1.94	1143.95	1143	12	1.912E-01	53.0
5	1	602.89	9727.	1793.	1.98	1206.05	1199	15	1.621E 01	1.2
6	1	646.12	618.	1328.	2.09	1292.44	1286	15	1.029E 00	9.3
7	1	657.25	5529.	1176.	1.99	1314.69	1306	16	9.215E 00	1.6
8	1	665.34	342.	945.	2.11	1330.86	1326	12	5.695E-01	13.8

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 \*\*\*\*\* 10 JAN 1980 12:21:26 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225N  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9414.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAB1

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 \*  
 ACQUISITION DATE: 9JAN80 1355:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 637. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	5163.	1020.	0.0103	0.0011	10.5
%-ANTIMONY	564.2	2172.	201047.	1.0776	0.0029	0.3
%-ARSENIC	657.3	1662.	6580.	0.3132	0.0089	2.9

1009:	359.	421.	362.	347.	366.	369.	389.	382.	371.
1018:	400.	417.	462.	500.	521.	546.	544.	486.	402.
1027:	378.	371.	331.	373.	326.	328.	351.	392.	361.

1117:	8472.	12961.	15267.	12489.	6722.	2646.	1433.	2006.	5194.
1126:	13441.	27525.	41819.	47605.	38454.	19730.	5809.	1206.	408.
1135:	297.	264.	226.	235.	236.	240.	242.	221.	256.

1301:	73.	110.	92.	105.	95.	109.	97.	114.	122.
1310:	142.	255.	552.	1053.	1440.	1608.	1237.	723.	263.
1319:	137.	89.	101.	92.	65.	85.	90.	87.	102.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.25	1020.	5163.	2.62	1022.92	1016	14	1.701E 00	10.4
2	2	559.26	62805.	2611.	2.01	1118.86	1108	32	1.047E 02	0.4
3	2	564.23	201047.	2172.	2.00	1128.78	1108	32	3.351E 02	0.2
4	1	602.87	11499.	2784.	2.02	1206.01	1194	24	1.917E 01	1.1
5	1	645.95	709.	1302.	2.05	1292.10	1286	12	1.182E 00	8.1
6	1	657.25	6580.	1662.	2.04	1314.69	1305	19	1.097E 01	1.5
7	1	665.56	433.	1082.	2.62	1331.29	1324	13	7.224E-01	11.8

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 \*\*\*\*\* 10 JAN 1980 12:22:36 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q2250  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9191.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1406:13 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3483.	1327.	0.0138	0.0010	6.9
%-ANTIMONY	564.2	1066.	112515.	0.6189	0.0021	0.3
%-ARSENIC	657.3	851.	3549.	0.1738	0.0055	3.2

1009:	188.	234.	222.	215.	197.	215.	224.	209.	200.
1018:	273.	299.	309.	359.	354.	382.	367.	299.	269.
1027:	222.	226.	200.	166.	196.	177.	169.	169.	195.

1117:	4607.	7099.	8470.	7005.	3830.	1494.	715.	1056.	2758.
1126:	7223.	15117.	23506.	26893.	21847.	11094.	3357.	672.	149.
1135:	121.	100.	84.	102.	107.	96.	94.	125.	92.

1301:	59.	37.	56.	50.	44.	57.	43.	51.	55.
1310:	61.	131.	291.	549.	810.	903.	673.	370.	163.
1319:	58.	43.	47.	38.	45.	43.	58.	40.	48.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	1327.	3483.	3.39	1022.47	1013	18	2.212E 00	6.9
2	2	559.28	34668.	1376.	1.99	1118.89	1109	31	5.778E 01	0.6
3	2	564.24	112515.	1066.	1.97	1128.80	1109	31	1.875E 02	0.3
4	1	602.92	6734.	1260.	2.02	1206.11	1195	20	1.122E 01	1.4
5	1	646.20	425.	743.	2.16	1292.60	1284	15	7.076E-01	10.3
6	1	657.26	3549.	851.	1.97	1314.70	1306	18	5.915E 00	2.0
7	1	665.55	177.	512.	2.01	1331.28	1326	11	2.947E-01	19.6

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 \*\*\*\*\* 10 JAN 1980 12:23:47 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225P  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8375.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 9JAN80 1416:47 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1.  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.2	3311.	1100.	0.0127	0.0010	8.0
%-ANTIMONY	564.2	1100.	118568.	0.7170	0.0024	0.3
%-ARSENIC	657.3	893.	3775.	0.2039	0.0064	3.1

1009:	243.	200.	211.	188.	216.	239.	194.	207.	221.
1018:	236.	256.	305.	344.	358.	358.	348.	307.	264.
1027:	222.	232.	219.	189.	158.	188.	205.	200.	200.

1117:	4882.	7443.	8781.	7277.	4020.	1524.	759.	1105.	2883.
1126:	7787.	16226.	24782.	28372.	22802.	11464.	3435.	642.	163.
1135:	107.	105.	89.	88.	113.	97.	94.	109.	121.

1301:	54.	42.	54.	46.	54.	53.	59.	61.	52.
1310:	94.	138.	313.	575.	809.	918.	733.	417.	164.
1319:	57.	58.	43.	44.	44.	42.	57.	50.	45.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.15	1100.	3311.	3.03	1022.71	1015	17	1.833E 00	8.0
2	2	559.27	36450.	1417.	2.02	1118.88	1108	32	6.075E 01	0.5
3	2	564.23	118568.	1100.	1.98	1128.78	1108	32	1.976E 02	0.3
4	1	602.91	7073.	1053.	2.00	1206.09	1197	18	1.179E 01	1.4
5	1	645.92	484.	1008.	2.26	1292.04	1281	21	8.063E-01	10.3
6	1	657.28	3775.	893.	2.05	1314.75	1304	19	6.292E 00	2.0
7	1	665.87	217.	517.	1.92	1331.91	1326	11	3.618E-01	16.3



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 \*\*\*\*\* 10 1980 12:24:56 PM \*\*\*\*\*  
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91119065 QY RF LFAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q2250  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10157.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1427:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.2	3520.	1420.	0.0136	0.0009	6.5
Z-ANTIMONY	564.2	1233.	121614.	0.6075	0.0020	0.3
Z-ARSENIC	657.3	979.	4070.	0.1821	0.0056	3.1

1009:	247.	233.	235.	221.	231.	224.	219.	230.	240.
1018:	267.	291.	342.	399.	448.	473.	419.	350.	311.
1027:	283.	217.	222.	220.	217.	219.	207.	203.	186.

1117:	5067.	7867.	9109.	7700.	4220.	1612.	834.	1191.	3052.
1126:	8078.	16572.	25386.	29030.	23303.	11871.	3552.	720.	175.
1135:	150.	124.	113.	103.	99.	100.	111.	105.	120.

1301:	54.	52.	51.	56.	53.	63.	59.	70.	69.
1310:	101.	174.	354.	596.	873.	956.	825.	413.	159.
1319:	57.	59.	47.	56.	53.	46.	57.	44.	62.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.16	1420.	3520.	2.81	1022.73	1015	16	2.367E 00	6.5
2	2	559.27	38287.	1475.	2.02	1118.88	1108	37	6.381E 01	0.5
3	2	564.23	121614.	1233.	1.98	1128.78	1108	37	2.027E 02	0.3
4	1	602.89	7082.	1166.	1.99	1206.05	1198	18	1.180E 01	1.4
5	1	646.07	420.	848.	1.96	1292.34	1286	15	6.995E-01	11.0
6	1	657.28	4070.	979.	2.08	1314.75	1303	19	6.783E 00	1.9



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 \*\*\*\*\* 10 1980 12:26:04 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q225R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9949.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1437:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	7350.	1785.	0.0177	0.0013	7.2
%-ANTIMONY	564.2	3218.	283208.	1.4472	0.0035	0.2
%-ARSENIC	657.2	2520.	9365.	0.4297	0.0118	2.7

1009:	533.	578.	530.	576.	497.	552.	530.	540.	581.
1018:	563.	669.	638.	744.	782.	799.	718.	714.	579.
1027:	539.	496.	522.	516.	492.	502.	514.	503.	478.

1117:	12334.	18505.	21366.	17265.	9386.	3655.	2062.	3027.	7742.
1126:	19885.	40116.	60030.	67035.	52493.	26474.	8100.	1783.	600.
1135:	499.	462.	455.	365.	393.	333.	391.	391.	398.

1301:	162.	168.	175.	144.	133.	146.	161.	175.	205.
1310:	264.	433.	842.	1532.	2079.	2207.	1819.	959.	389.
1319:	197.	148.	156.	156.	158.	155.	137.	156.	144.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	1785.	7350.	3.21	1022.53	1015	14	2.975E 00	7.2
2	2	559.24	89030.	3765.	2.03	1118.81	1108	33	1.484E 02	0.3
3	2	564.20	283208.	3218.	2.00	1128.72	1108	33	4.720E 02	0.2
4	1	602.85	16704.	4265.	1.98	1205.98	1194	20	2.784E 01	1.0
5	1	645.88	1116.	2282.	2.14	1291.97	1286	14	1.860E 00	6.8
6	1	657.23	9365.	2520.	2.09	1314.64	1306	17	1.561E 01	1.3
7	1	665.66	501.	1658.	2.22	1331.50	1326	11	8.347E-01	12.3

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 \*\*\*\*\* 10 1980 12:27:14 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q2255  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9766.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1449:02 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.2	3645.	976.	0.0099	0.0009	9.4
%-ANTIMONY	564.2	1286.	133816.	0.6979	0.0022	0.3
%-ARSENIC	657.3	1608.	4267.	0.2004	0.0063	3.2

1009:	247.	270.	229.	247.	253.	231.	271.	246.	259.
1018:	249.	286.	331.	378.	429.	408.	409.	326.	294.
1027:	264.	264.	256.	213.	242.	233.	262.	220.	217.

1117:	5556.	8633.	10137.	8394.	4641.	1742.	906.	1304.	3269.
1126:	8918.	18361.	27973.	31690.	25652.	13035.	3893.	729.	217.
1135:	130.	134.	119.	117.	114.	125.	113.	120.	118.

1301:	64.	65.	63.	59.	63.	63.	78.	61.	77.
1310:	104.	170.	370.	682.	939.	1090.	845.	444.	166.
1319:	72.	51.	52.	40.	50.	54.	64.	78.	62.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.16	976.	3645.	2.49	1022.72	1016	15	1.627E 00	9.3
2	2	559.27	41892.	1676.	2.01	1118.88	1109	31	6.982E 01	0.5
3	2	564.23	133816.	1286.	1.99	1128.78	1109	31	2.230E 02	0.3
4	1	602.91	7800.	1250.	2.00	1206.09	1197	17	1.300E 01	1.3
5	1	645.97	529.	964.	2.12	1292.13	1286	16	8.818E-01	9.4
6	1	657.26	4267.	1608.	1.99	1314.70	1303	24	7.111E 00	2.0
7	1	665.40	197.	665.	2.03	1330.98	1327	10	3.283E-01	19.8

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 \*\*\*\*\* 10 1980 12:28:24 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q2525T  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12870.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1459:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	4011.	1501.	0.0017	0.0008	6.6
Z-ANTIMONY	564.2	1648.	163050.	0.6465	0.0019	0.3
Z-ARSENIC	657.3	1144.	5340.	0.1912	0.0056	2.9

1009:	295.	317.	289.	313.	315.	323.	303.	322.	341.
1018:	308.	348.	448.	535.	600.	528.	541.	466.	351.
1027:	341.	304.	305.	345.	319.	241.	249.	328.	277.

1117:	7102.	10888.	12601.	10352.	5661.	2153.	1162.	1619.	4239.
1126:	10964.	22509.	33988.	38789.	30899.	15785.	4738.	925.	304.
1135:	191.	196.	163.	163.	169.	157.	173.	158.	176.

1301:	83.	75.	72.	93.	81.	87.	71.	79.	95.
1310:	140.	219.	460.	826.	1134.	1314.	1070.	538.	230.
1319:	111.	76.	76.	65.	63.	67.	80.	69.	74.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	1501.	4011.	2.52	1022.53	1016	13	2.502E 00	6.5
2	2	559.26	52535.	2042.	2.02	1118.85	1107	34	8.756E 01	0.5
3	2	564.22	163050.	1648.	1.99	1128.77	1107	34	2.717E 02	0.3
4	1	602.89	9559.	1660.	2.00	1206.05	1198	16	1.593E 01	1.2
5	1	645.91	522.	1011.	1.98	1292.02	1286	12	8.701E-01	9.7
6	1	657.27	5340.	1144.	2.04	1314.73	1307	16	8.900E 00	1.6
7	1	665.47	403.	1026.	2.25	1331.12	1324	14	6.709E-01	12.3

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 \*\*\*\*\* 10 1980 12:29:34 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11193.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 9JAN80 1510:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2936.	0. <	0.0023	NOT DETECTABLE	
%-ANTIMONY	564.2	1082.	124815.	0.5701	0.0018	0.3
%-ARSENIC	657.3	782.	3047.	0.1261	0.0041	3.3

1009:	201.	205.	206.	204.	202.	226.	199.	197.	212.
1018:	198.	222.	227.	248.	264.	263.	260.	234.	207.
1027:	198.	206.	195.	172.	231.	181.	170.	189.	182.

1117:	3891.	6029.	6884.	5812.	3199.	1342.	796.	1122.	3044.
1126:	8201.	16956.	25598.	29816.	24071.	12252.	3809.	653.	171.
1135:	107.	116.	106.	102.	104.	117.	98.	110.	104.

1301:	55.	39.	41.	48.	49.	49.	37.	57.	39.
1310:	62.	122.	261.	505.	656.	740.	599.	323.	123.
1319:	51.	51.	38.	46.	40.	42.	47.	41.	44.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.28	28904.	1440.	2.03	1118.89	1108	29	4.817E 01	0.6
2	2	564.24	124815.	1082.	1.99	1128.80	1108	29	2.080E 02	0.3
3	1	602.90	7437.	1544.	2.03	1206.06	1194	25	1.240E 01	1.4
4	1	646.16	520.	522.	2.07	1292.53	1287	12	8.666E-01	7.6
5	1	657.25	3047.	782.	2.05	1314.69	1306	17	5.079E 00	2.2
6	1	665.37	207.	537.	2.21	1330.92	1325	12	3.448E-01	17.3

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 \*\*\*\*\* 10 1980 12:30:45 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10197.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1520:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL.: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3556.	0. <	0.0028	NOT DETECTABLE	
%-ANTIMONY	564.2	1355.	150499.	0.7560	0.0023	0.3
%-ARSENIC	657.3	972.	3777.	0.1723	0.0054	3.1

1009:	239.	228.	280.	265.	268.	274.	248.	256.	271.
1018:	277.	284.	269.	285.	296.	336.	286.	242.	253.
1027:	252.	249.	252.	253.	242.	242.	219.	229.	249.

1117:	4932.	7515.	8796.	7387.	4190.	1651.	983.	1380.	3849.
1126:	10039.	20553.	31341.	35833.	28516.	14824.	4311.	798.	224.
1135:	166.	137.	145.	112.	123.	138.	120.	119.	149.

1301:	71.	67.	50.	72.	54.	70.	52.	73.	81.
1310:	99.	159.	323.	603.	876.	901.	754.	407.	135.
1319:	82.	54.	51.	61.	60.	48.	57.	63.	55.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.28	37012.	1717.	2.05	1118.89	1108	33	6.169E 01	0.5
2	2	564.23	150499.	1355.	1.99	1128.78	1108	33	2.508E 02	0.3
3	1	602.90	8858.	1796.	1.98	1206.06	1194	21	1.476E 01	1.3
4	1	645.95	664.	783.	2.30	1292.10	1286	13	1.107E 00	7.1
5	1	657.25	3777.	972.	2.03	1314.69	1307	16	6.294E 00	2.0
6	1	665.46	180.	608.	2.10	1331.08	1327	10	3.006E-01	20.7

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 \*\*\*\*\* 10 JAN 1980 12:31:53 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6789.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1531:35 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1667.	0. <	0.0029	NOT DETECTABLE	
%-ANTIMONY	564.2	522.	71989.	0.5442	0.0022	0.4
%-ARSENIC	657.3	390.	1749.	0.1204	0.0045	3.8

1009:	129.	119.	139.	104.	124.	103.	117.	123.	121.
1018:	150.	127.	132.	122.	132.	129.	147.	129.	122.
1027:	108.	125.	116.	113.	101.	122.	107.	108.	113.

1117:	2280.	3232.	3964.	3275.	1814.	748.	417.	617.	1693.
1126:	4710.	9750.	15159.	16994.	13789.	7094.	2113.	394.	82.
1135:	62.	51.	37.	54.	46.	39.	50.	51.	70.

1301:	20.	25.	14.	17.	25.	21.	22.	35.	22.
1310:	35.	64.	153.	271.	346.	399.	339.	195.	78.
1319:	33.	24.	27.	18.	20.	27.	21.	18.	30.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	16475.	717.	2.05	1118.89	1107	33	2.746E 01	0.8
2	2	564.23	71989.	522.	1.98	1128.79	1107	33	1.200E 02	0.4
3	1	602.91	4323.	780.	1.98	1206.09	1194	26	7.205E 00	1.8
4	1	646.27	288.	476.	2.23	1292.75	1283	17	4.796E-01	12.2
5	1	657.28	1749.	390.	2.17	1314.74	1304	20	2.915E 00	2.9

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 \*\*\*\*\* 10 1980 12:33:04 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8867.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 9JAN80 1542:02 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3375.	0. <	0.0032	NOT DETECTABLE	
%-ANTIMONY	564.2	1225.	140370.	0.8140	0.0025	0.3
%-ARSENIC	657.3	908.	3562.	0.1886	0.0060	3.2

1009:	218.	251.	231.	241.	223.	234.	248.	231.	223.
1018:	249.	257.	277.	286.	302.	277.	275.	259.	293.
1027:	215.	231.	235.	202.	199.	219.	207.	211.	205.

1117:	4781.	7216.	8456.	6952.	3891.	1488.	913.	1335.	3523.
1126:	9444.	19044.	29432.	33532.	26581.	13668.	4089.	787.	205.
1135:	141.	145.	124.	130.	129.	128.	106.	128.	119.

1301:	60.	48.	60.	70.	65.	77.	57.	72.	66.
1310:	81.	152.	339.	509.	847.	857.	705.	370.	165.
1319:	60.	58.	54.	41.	52.	44.	50.	57.	49.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	35136.	1526.	2.03	1118.87	1107	35	5.856E 01	0.6
2	2	564.22	140370.	1225.	1.98	1128.77	1107	35	2.339E 02	0.3
3	1	602.89	8309.	1179.	2.03	1206.06	1197	18	1.385E 01	1.2
4	1	646.14	433.	1373.	1.92	1292.49	1287	19	7.214E-01	13.0
5	1	657.25	3562.	908.	2.02	1314.69	1307	16	5.937E 00	2.1
6	1	665.47	187.	638.	1.91	1331.11	1327	11	3.121E-01	20.4



\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:34:17 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0302E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9487.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1552:36 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3387.	0. <	0.0030	NOT DETECTABLE	
%-ANTIMONY	564.2	1252.	143787.	0.7807	0.0024	0.3
%-ARSENIC	657.3	440.	3634.	0.1807	0.0055	3.0

1009:	254.	242.	268.	276.	262.	266.	249.	220.	251.
1018:	259.	250.	288.	255.	297.	299.	251.	295.	246.
1027:	251.	225.	215.	219.	236.	193.	224.	215.	227.

1117:	4658.	7205.	8468.	6957.	3805.	1568.	953.	1371.	3560.
1126:	9636.	19663.	29892.	33865.	27517.	14052.	4157.	832.	212.
1135:	140.	141.	124.	125.	129.	138.	120.	132.	110.

1301:	46.	61.	59.	60.	54.	41.	51.	65.	61.
1310:	91.	153.	319.	579.	787.	848.	736.	385.	168.
1319:	73.	49.	39.	30.	54.	49.	59.	57.	61.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	35132.	1527.	2.04	1118.88	1107	33	5.855E 01	0.6
2	2	564.23	143787.	1252.	2.00	1128.78	1107	33	2.396E 02	0.3
3	1	602.87	8430.	1555.	1.97	1206.02	1194	20	1.405E 01	1.3
4	1	646.08	554.	651.	1.95	1292.36	1286	12	9.228E-01	7.8
5	3	657.27	3634.	440.	2.09	1314.72	1303	41	6.056E 00	1.8
6	3	665.85	276.	430.	2.35	1331.87	1303	41	4.594E-01	12.2



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 \*\*\*\*\* 10 1980 12:35:25 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9103.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1603:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	2188.	0. <	0.0026	NOT DETECTABLE	
Z-ANTIMONY	564.2	847.	95581.	0.5419	0.0020	0.4
Z-ARSENIC	657.2	590.	2140.	0.1114	0.0040	3.6

1009:	158.	156.	182.	145.	175.	137.	168.	154.	148.
1018:	152.	158.	187.	170.	183.	201.	183.	187.	169.
1027:	151.	145.	149.	153.	153.	127.	159.	148.	168.

1117:	2795.	4459.	5118.	4223.	2361.	967.	534.	868.	2307.
1126:	6350.	12977.	19650.	22921.	18368.	9361.	2727.	533.	127.
1135:	73.	72.	72.	70.	52.	69.	53.	57.	80.

1301:	37.	36.	36.	32.	39.	27.	30.	39.	47.
1310:	66.	100.	161.	342.	506.	526.	413.	228.	83.
1319:	28.	34.	36.	27.	33.	24.	39.	27.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	21125.	1100.	2.01	1118.88	1109	34	3.521E 01	0.7
2	2	564.23	95581.	847.	1.98	1128.80	1109	34	1.593E 02	0.3
3	1	602.86	5819.	812.	2.01	1206.00	1197	17	9.698E 00	1.5
4	1	646.22	416.	449.	1.98	1292.65	1287	13	6.927E-01	8.7
5	1	657.24	2140.	590.	1.99	1314.67	1305	18	3.567E 00	2.7
6	1	665.31	189.	476.	2.49	1330.79	1323	14	3.148E-01	17.9

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 \*\*\*\*\* 10 1980 12:36:36 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8228.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1613:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	1979.	0. <	0.0027	NOT DETECTABLE	
Z-ANTIMONY	564.2	806.	87696.	0.5511	0.0021	0.4
Z-ARSENIC	657.2	589.	1973.	0.1142	0.0043	3.7

1009:	148.	147.	136.	135.	147.	129.	129.	142.	157.
1018:	139.	122.	148.	166.	147.	181.	161.	180.	158.
1027:	132.	146.	142.	137.	133.	146.	119.	131.	131.

1117:	2553.	3997.	4500.	3941.	2171.	863.	564.	795.	2131.
1126:	5697.	11980.	18178.	21137.	16796.	8599.	2466.	446.	121.
1135:	73.	68.	55.	47.	59.	60.	53.	60.	52.

1301:	36.	30.	28.	38.	31.	36.	31.	33.	33.
1310:	37.	97.	172.	320.	441.	476.	387.	199.	90.
1319:	40.	31.	33.	28.	20.	26.	32.	36.	24.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.28	19377.	1096.	2.07	1118.90	1107	44	3.230E 01	0.8
2	2	564.23	87696.	806.	1.97	1128.79	1107	44	1.462E 02	0.3
3	1	602.88	5584.	608.	1.97	1206.03	1198	17	9.306E 00	1.5
4	1	646.03	403.	575.	2.16	1292.26	1284	20	6.717E-01	9.8
5	1	657.24	1973.	589.	2.06	1314.66	1308	19	3.288E 00	2.8

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 \*\*\*\*\* 10 JAN 1980 12:37:46 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7845.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1624:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	2823.	0. <	0.0035	NOT DETECTABLE	
%-ANTIMONY	564.2	1011.	116712.	0.7707	0.0026	0.3
%-ARSENIC	657.3	386.	2772.	0.1690	0.0055	3.2

1009:	204.	196.	205.	192.	213.	179.	190.	227.	212.
1018:	204.	206.	210.	229.	216.	227.	263.	219.	218.
1027:	199.	193.	166.	211.	184.	215.	193.	173.	168.

1117:	3793.	5973.	6854.	5738.	3200.	1269.	738.	1070.	2902.
1126:	7782.	16012.	24222.	27411.	22514.	11268.	3316.	655.	175.
1135:	127.	91.	104.	81.	95.	84.	90.	114.	102.

1301:	37.	46.	44.	40.	52.	53.	43.	51.	38.
1310:	63.	122.	237.	435.	622.	664.	554.	327.	121.
1319:	55.	42.	39.	46.	34.	39.	38.	43.	33.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	28678.	1333.	2.03	1118.88	1109	32	4.780E 01	0.6
2	2	564.23	116712.	1011.	2.00	1128.78	1109	32	1.945E 02	0.3
3	1	602.88	6924.	1230.	1.99	1206.03	1197	20	1.154E 01	1.4
4	1	646.01	504.	680.	2.30	1292.22	1284	16	8.396E-01	8.6
5	4	657.28	2772.	386.	2.07	1314.74	1308	30	4.619E 00	2.1
6	4	665.39	144.	359.	1.84	1330.95	1308	30	2.403E-01	20.4

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 \*\*\*\*\* 10 1980 12:38:56 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q3021  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12103.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 9JAN80 1634:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3152.	0. <	0.0024	NOT DETECTABLE	
%-ANTIMONY	564.2	1324.	136838.	0.5868	0.0018	0.3
%-ARSENIC	657.3	1940.	2817.	0.1118	0.0042	3.8

1009:	204.	210.	237.	215.	237.	216.	207.	231.	216.
1010:	236.	235.	283.	279.	247.	244.	240.	236.	239.
1027:	240.	226.	204.	204.	223.	191.	232.	194.	193.

1117:	3952.	5932.	6897.	5754.	3253.	1408.	862.	1340.	3371.
1126:	9173.	18629.	28395.	32725.	26208.	13294.	4029.	790.	220.
1135:	129.	117.	109.	105.	101.	102.	97.	108.	110.

1301:	52.	51.	48.	58.	57.	51.	43.	44.	63.
1310:	77.	132.	245.	459.	650.	701.	548.	330.	135.
1319:	54.	46.	57.	38.	46.	32.	40.	34.	50.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	29052.	1828.	2.07	1118.88	1108	44	4.842E 01	0.6
2	2	564.23	136838.	1324.	1.98	1128.79	1108	44	2.281E 02	0.3
3	1	602.91	7890.	1325.	2.01	1206.08	1195	20	1.315E 01	1.3
4	1	646.07	514.	767.	1.92	1292.34	1287	13	8.564E-01	8.8
5	1	657.26	2817.	1940.	2.03	1314.71	1305	40	4.695E 00	2.9

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:40:06 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9028.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1645:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL 1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2334.	0. <	0.0028	NOT DETECTABLE	
%-ANTIMONY	564.3	846.	98508.	0.5673	0.0020	0.4
%-ARSENIC	657.3	714.	2268.	0.1213	0.0044	3.6

1009:	189.	159.	162.	156.	157.	153.	148.	164.	171.
1018:	176.	168.	188.	199.	199.	196.	179.	184.	178.
1027:	167.	165.	159.	162.	154.	130.	139.	143.	163.

1117:	2916.	4471.	5347.	4571.	2525.	1045.	603.	855.	2303.
1126:	6223.	12844.	20450.	23649.	19352.	9952.	3143.	562.	122.
1135:	102.	78.	74.	62.	57.	65.	62.	76.	74.

1301:	54.	33.	43.	50.	40.	34.	40.	42.	36.
1310:	49.	89.	187.	334.	486.	602.	451.	258.	104.
1319:	44.	27.	34.	32.	49.	37.	19.	27.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.30	22225.	1035.	2.03	1118.94	1107	37	3.704E 01	0.7
2	2	564.25	98508.	846.	1.97	1128.84	1107	37	1.642E 02	0.3
3	1	602.93	6137.	990.	2.04	1206.13	1195	24	1.023E 01	1.5
4	1	646.09	356.	637.	1.80	1292.39	1287	14	5.933E-01	11.3
5	1	657.31	2268.	714.	1.97	1314.81	1305	21	3.780E 00	2.7

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 \*\*\*\*\* 10 1980 12:41:17 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0302K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7873.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1655:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	2474.	0. <	0.0033	NOT DETECTABLE	
%-ANTIMONY	564.3	934.	108345.	0.7169	0.0025	0.3
%-ARSENIC	657.3	574.	2540.	0.1565	0.0053	3.4

1009:	186.	176.	177.	174.	175.	164.	196.	180.	162.
1018:	200.	189.	167.	202.	215.	212.	215.	188.	190.
1027:	187.	167.	167.	178.	181.	181.	160.	157.	160.

1117:	3188.	5060.	5960.	5101.	2917.	1149.	632.	923.	2555.
1126:	6743.	14207.	22230.	26232.	21347.	10911.	3412.	633.	132.
1135:	97.	91.	88.	85.	67.	93.	84.	89.	97.

1301:	44.	39.	43.	40.	46.	33.	46.	33.	47.
1310:	44.	93.	199.	389.	563.	658.	517.	264.	133.
1319:	60.	41.	40.	34.	40.	37.	37.	42.	37.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.30	24902.	1130.	2.03	1118.94	1107	36	4.150E 01	0.7
2	2	564.26	108345.	934.	1.97	1128.84	1107	36	1.806E 02	0.3
3	1	602.94	6638.	1336.	2.01	1206.16	1198	22	1.106E 01	1.5
4	1	645.92	468.	570.	2.32	1292.04	1283	17	7.795E-01	8.6
5	1	657.29	2540.	574.	1.96	1314.77	1308	15	4.233E 00	2.4
6	1	665.74	99.	540.	2.21	1331.65	1327	12	1.643E-01	34.8

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 \*\*\*\*\* 10 1980 12:44:49 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302N  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12074.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1727:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3413.	0. <	0.0026	NOT DETECTABLE	
%-ANTIMONY	564.3	1376.	151193.	0.6560	0.0020	0.3
%-ARSENIC	657.3	1105.	3163.	0.1288	0.0043	3.4

1009:	263.	272.	240.	253.	257.	226.	253.	248.	230.
1018:	249.	265.	283.	259.	308.	270.	296.	273.	246.
1027:	260.	226.	249.	215.	220.	255.	236.	234.	219.

1117:	4181.	6370.	7472.	6471.	3620.	1563.	893.	1374.	3599.
1126:	9523.	20156.	31076.	36076.	29600.	15283.	4673.	948.	211.
1135:	149.	152.	128.	158.	108.	113.	119.	118.	119.

1301:	73.	46.	56.	60.	54.	65.	51.	66.	67.
1310:	80.	143.	259.	477.	716.	793.	618.	364.	127.
1319:	75.	50.	57.	41.	63.	45.	54.	37.	48.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.30	31403.	1781.	2.05	1118.93	1110	32	5.234E 01	0.6
2	2	564.25	151193.	1376.	1.98	1128.83	1110	32	2.520E 02	0.3
3	1	602.92	9069.	1547.	1.97	1206.11	1194	23	1.512E 01	1.2
4	1	646.01	573.	861.	1.98	1292.22	1285	14	9.545E-01	8.4
5	1	657.28	3163.	1105.	2.02	1314.74	1303	22	5.272E 00	2.3

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 \*\*\*\*\* 10 1980 12:45:58 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q3020  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10306.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1738:05 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGD	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	2640.	0. <	0.0027	NOT DETECTABLE	
Z-ANTIMONY	564.3	1174.	114581.	0.5835	0.0020	0.3
Z-ARSENIC	657.3	620.	2597.	0.1245	0.0042	3.4

1009:	208.	204.	205.	194.	187.	207.	184.	200.	176.
1018:	183.	183.	213.	261.	209.	232.	242.	198.	199.
1027:	181.	163.	201.	177.	168.	185.	182.	195.	164.

1117:	3310.	5156.	6184.	5125.	2943.	1215.	693.	1041.	2626.
1126:	7234.	15190.	23326.	27721.	22447.	11731.	3607.	664.	157.
1135:	118.	91.	98.	85.	83.	90.	75.	67.	100.

1301:	45.	43.	57.	44.	50.	43.	41.	32.	56.
1310:	70.	92.	208.	385.	623.	674.	505.	278.	123.
1319:	55.	43.	43.	43.	28.	38.	41.	42.	53.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.30	25248.	1392.	2.02	1118.93	1109	51	4.208E 01	0.7
2	2	564.26	114581.	1174.	1.98	1128.84	1109	51	1.910E 02	0.3
3	1	602.93	6672.	1860.	1.99	1206.13	1198	30	1.112E 01	1.5
4	1	646.08	449.	579.	2.47	1292.36	1287	13	7.485E-01	8.9
5	1	657.27	2597.	620.	1.91	1314.73	1307	16	4.328E 00	2.4



\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:47:08 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302P  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11616.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1748:36 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2794.	0. <	0.0025	NOT DETECTABLE	
%-ANTIMONY	564.3	1101.	124942.	0.5656	0.0018	0.3
%-ARSENIC	657.3	863.	2489.	0.1063	0.0038	3.6

1009:	186.	207.	225.	193.	207.	215.	198.	202.	210.
1018:	232.	211.	210.	237.	241.	212.	238.	199.	211.
1027:	210.	181.	160.	177.	196.	189.	177.	177.	150.

1117:	3282.	5083.	5950.	5096.	2884.	1337.	773.	1098.	2977.
1126:	7913.	16457.	25465.	30001.	24490.	12717.	3815.	761.	195.
1135:	99.	103.	108.	102.	105.	88.	99.	98.	102.

1301:	39.	43.	42.	57.	49.	45.	47.	37.	50.
1310:	65.	96.	225.	388.	549.	658.	477.	311.	139.
1319:	49.	48.	50.	47.	40.	48.	39.	40.	41.

PULSE-P11 F-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.30	24912.	1486.	2.05	1118.94	1110	28	4.152E 01	0.7
2	2	564.26	124942.	1101.	1.98	1128.84	1110	28	2.082E 02	0.3
3	1	602.91	7648.	1150.	2.02	1206.08	1194	20	1.275E 01	1.3
4	1	646.06	557.	1003.	2.01	1292.33	1284	21	9.280E-01	9.1
5	1	657.29	2489.	863.	2.02	1314.77	1305	17	4.148E 00	2.6
6	1	665.61	223.	770.	2.92	1331.40	1324	19	3.715E-01	18.8

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:48:16 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q3020  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 15686.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1759:10 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 633. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 95.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4762.	0. <	0.0024	NOT DETECTABLE	
%-ANTIMONY	564.2	1939.	200989.	0.6750	0.0018	0.3
%-ARSENIC	657.3	1248.	4515.	0.1435	0.0044	3.0

1009:	345.	369.	402.	322.	321.	335.	363.	340.	320.
1010:	354.	392.	363.	391.	441.	418.	380.	348.	346.
1027:	339.	330.	354.	349.	352.	308.	305.	322.	314.

1117:	6017.	9005.	10743.	9049.	5157.	2142.	1254.	1910.	4776.
1126:	13020.	27323.	41495.	48169.	38590.	20170.	6171.	1295.	362.
1135:	271.	245.	179.	225.	214.	199.	187.	216.	198.

1301:	93.	87.	86.	75.	84.	71.	83.	95.	104.
1310:	123.	201.	379.	697.	1069.	1129.	875.	518.	202.
1319:	108.	57.	81.	76.	75.	100.	85.	79.	70.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.29	44860.	2367.	2.05	1118.91	1108	32	7.477E 01	0.5
2	2	564.24	200989.	1939.	1.98	1128.80	1108	32	3.350E 02	0.2
3	1	602.90	12673.	2290.	2.01	1206.06	1196	20	2.112E 01	1.0
4	1	646.06	736.	1433.	2.12	1292.33	1284	15	1.226E 00	8.2
5	1	657.26	4515.	1248.	1.99	1314.70	1306	16	7.526E 00	1.9
6	1	665.54	311.	815.	2.13	1331.25	1327	10	5.178E-01	14.2

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 \*\*\*\*\* 10 1980 12:42:28 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11796.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1706:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2409.	234.	0.0022	0.0007	30.4
%-ANTIMONY	564.3	951.	129265.	0.5719	0.0018	0.3
%-ARSENIC	657.3	806.	2940.	0.1214	0.0040	3.3

1009:	227.	222.	220.	229.	216.	236.	204.	199.	235.
1018:	179.	205.	213.	268.	272.	256.	237.	221.	244.
1027:	225.	217.	202.	202.	190.	222.	192.	186.	182.

1117:	3561.	5624.	6772.	5874.	3272.	1317.	770.	1137.	3011.
1126:	8328.	16996.	26500.	30798.	25038.	13279.	4029.	682.	182.
1135:	140.	109.	97.	92.	107.	122.	98.	96.	112.

1301:	57.	51.	53.	41.	52.	51.	51.	60.	55.
1310:	64.	127.	246.	431.	662.	727.	586.	323.	146.
1319:	78.	45.	38.	45.	41.	44.	50.	45.	61.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	234.	2409.	2.19	1022.65	1017	11	3.895E-01	30.4
2	2	559.32	28228.	1256.	2.03	1118.97	1107	31	4.705E 01	0.6
3	2	564.25	129265.	951.	1.99	1128.83	1107	31	2.154E 02	0.3
4	1	602.93	7735.	1700.	1.98	1206.12	1196	25	1.289E 01	1.4
5	1	646.01	462.	860.	1.76	1292.22	1282	16	7.702E-01	10.1
6	1	657.29	2940.	806.	2.03	1314.76	1305	18	4.899E 00	2.3

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 \*\*\*\*\* 10 JAN 1980 12:43:38 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10897.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1716:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2736.	0. <	0.0026	NOT DETECTABLE	
%-ANTIMONY	564.3	1008.	115053.	0.5521	0.0018	0.3
%-ARSENIC	657.3	1556.	2374.	0.1066	0.0042	3.9

1009:	156.	198.	191.	188.	190.	167.	194.	235.	189.
1018:	196.	188.	224.	207.	246.	218.	223.	201.	209.
1027:	204.	196.	173.	173.	183.	198.	176.	184.	182.

1117:	3138.	5027.	5914.	4939.	2906.	1174.	698.	1009.	2561.
1126:	7252.	15068.	23870.	27644.	22652.	11597.	3457.	702.	157.
1135:	107.	92.	76.	85.	90.	93.	77.	96.	88.

1301:	54.	37.	30.	47.	47.	50.	53.	52.	49.
1310:	68.	106.	205.	361.	588.	637.	518.	277.	121.
1319:	62.	46.	33.	39.	40.	34.	32.	42.	42.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.30	24541.	1259.	2.04	1118.94	1108	35	4.090E 01	0.7
2	2	564.25	115053.	1008.	1.96	1128.84	1108	35	1.918E 02	0.3
3	1	602.92	7140.	923.	1.95	1206.12	1197	18	1.190E 01	1.3
4	1	646.02	374.	931.	1.64	1292.24	1281	17	6.227E-01	12.7
5	1	657.29	2374.	1556.	1.90	1314.77	1307	25	3.957E 00	3.1
6	1	665.91	23.	511.	0.61	1332.00	1331	9	3.792E-02	****

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 \*\*\*\*\* 10 1980 12:49:24 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13426.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 9JAN80 1809:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2805.	362.	0.0032	0.0007	21.4
%-ANTIMONY	564.2	1226.	141683.	0.5570	0.0017	0.3
%-ARSENIC	657.2	1040.	3101.	0.1157	0.0039	3.4

1009:	250.	273.	238.	236.	227.	232.	218.	242.	225.
1018:	249.	237.	225.	270.	289.	322.	257.	239.	219.
1027:	218.	228.	199.	197.	215.	236.	233.	225.	206.

1117:	4134.	6530.	7431.	6266.	3603.	1484.	919.	1320.	3444.
1126:	9261.	19220.	29754.	33865.	27133.	13858.	4016.	817.	203.
1135:	164.	138.	131.	114.	138.	124.	115.	127.	97.

1301:	49.	67.	58.	66.	44.	55.	55.	63.	55.
1310:	78.	116.	272.	503.	723.	799.	608.	310.	128.
1319:	77.	56.	49.	57.	37.	47.	45.	56.	45.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	362.	2805.	1.81	1022.60	1017	13	6.029E-01	21.4
2	2	559.28	31526.	1494.	2.06	1118.90	1107	33	5.254E 01	0.6
3	2	564.23	141683.	1226.	1.97	1128.79	1107	33	2.361E 02	0.3
4	1	602.91	8984.	1615.	2.03	1206.09	1196	20	1.497E 01	1.2
5	1	645.94	614.	741.	2.18	1292.09	1286	13	1.023E 00	7.5
6	1	657.24	3101.	1040.	1.94	1314.67	1304	20	5.169E 00	2.3
7	1	665.53	264.	573.	2.46	1331.24	1325	12	4.398E-01	14.2

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:50:37 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q3025  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9244.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1020:34 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2715.	0. <	0.0032	NOT DETECTABLE	
%-ANTIMONY	564.2	1073.	122459.	0.7005	0.0023	0.3
%-ARSENIC	657.2	688.	2768.	0.1507	0.0051	3.4

1009:	216.	198.	204.	222.	198.	191.	213.	206.	201.
1018:	214.	213.	203.	214.	231.	225.	233.	219.	191.
1027:	177.	188.	189.	166.	193.	174.	176.	206.	177.

1117:	3630.	5753.	6621.	5371.	3043.	1326.	755.	1081.	2939.
1126:	7923.	16574.	25665.	29488.	23504.	12009.	3511.	658.	181.
1135:	110.	111.	106.	104.	89.	85.	92.	112.	91.

1301:	42.	47.	47.	37.	55.	44.	51.	43.	51.
1310:	82.	120.	255.	439.	630.	647.	522.	303.	133.
1319:	62.	37.	35.	38.	49.	47.	39.	46.	47.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	27472.	1338.	2.04	1118.87	1108	34	4.579E 01	0.6
2	2	564.23	122459.	1073.	1.97	1128.79	1108	34	2.041E 02	0.3
3	1	602.90	7797.	1296.	2.00	1206.06	1196	24	1.299E 01	1.3
4	1	646.10	462.	960.	1.92	1292.40	1284	19	7.696E-01	10.6
5	1	657.24	2768.	688.	2.09	1314.66	1306	16	4.614E 00	2.3
6	1	665.66	151.	579.	2.05	1331.48	1326	12	2.514E-01	24.0

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:51:47 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q302T  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11534.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 9JAN80 1831:09 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3768.	0. <	0.0030	NOT DETECTABLE	
%-ANTIMONY	564.2	1516.	155894.	0.7161	0.0021	0.3
%-ARSENIC	657.3	988.	3894.	0.1708	0.0053	3.1

1009:	253.	273.	276.	269.	270.	269.	276.	262.
1018:	282.	315.	278.	315.	323.	363.	292.	262.
1027:	269.	256.	263.	254.	228.	249.	249.	258.

1117:	5236.	7936.	9356.	7649.	4274.	1646.	1003.	1490.	3836.
1126:	10415.	21106.	32544.	37580.	29862.	15059.	4606.	906.	261.
1135:	173.	164.	151.	154.	129.	131.	111.	167.	136.

1301:	62.	65.	62.	69.	66.	76.	61.	75.	72.
1310:	86.	165.	306.	589.	886.	1022.	771.	433.	169.
1319:	68.	55.	69.	53.	57.	49.	58.	49.	69.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.27	38609.	1830.	2.03	1118.87	1107	36	6.435E 01	0.5
2	2	564.23	155894.	1516.	1.97	1128.78	1107	36	2.598E 02	0.3
3	1	602.89	9491.	1895.	2.02	1206.04	1196	21	1.582E 01	1.2
4	1	645.99	644.	861.	2.19	1292.19	1286	13	1.074E 00	7.6
5	1	657.29	3894.	988.	1.95	1314.76	1307	16	6.491E 00	2.0

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 12:52:56 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291A1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12499.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1841:47 \* FWHM(1332) 2.390  
 PRESFT TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSFT: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4338.	7277.	0.0715	0.0014	1.9
%-ANTIMONY	564.2	3772.	133750.	0.5680	0.0018	0.3
%-ARSENIC	657.4	452.	0. <	0.0041	NOT DETECTABLE	

1009:	178.	199.	188.	186.	213.	186.	228.	269.	288.
1018:	394.	629.	843.	1106.	1296.	1410.	1184.	965.	554.
1027:	426.	275.	229.	176.	173.	171.	168.	145.	181.

1117:	285.	317.	362.	365.	396.	478.	653.	1179.	3190.
1126:	8494.	17897.	27937.	32204.	26251.	13066.	3908.	714.	144.
1135:	99.	92.	100.	95.	82.	71.	76.	68.	88.

1301:	34.	38.	40.	27.	29.	32.	29.	33.	35.
1310:	38.	33.	32.	41.	41.	31.	40.	34.	35.
1319:	28.	36.	28.	41.	29.	29.	27.	28.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	7277.	4338.	2.88	1022.62	1012	24	1.213E 01	1.7
2	1	564.24	133750.	3772.	1.96	1128.81	1118	19	2.229E 02	0.3
3	1	602.89	8387.	819.	1.99	1206.05	1197	18	1.398E 01	1.2
4	1	646.06	535.	596.	2.03	1292.33	1283	16	8.909E-01	7.8



\*\*\*\*\*  
 \*\*\*\*\* 10 1980 12:54:03 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0291A2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 15826.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1852:17 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4977.	8952.	0.0701	0.0012	1.7
%-ANTIMONY	564.2	5385.	170794.	0.5739	0.0017	0.3
%-ARSENIC	657.4	556.	0. <	0.0036	NOT DETECTABLE	

1009:	241.	252.	265.	221.	250.	265.	299.	318.	410.
1018:	539.	762.	1045.	1409.	1665.	1605.	1565.	1121.	773.
1027:	508.	352.	280.	276.	245.	229.	233.	210.	231.
1117:	399.	405.	461.	530.	529.	608.	770.	1508.	4011.
1126:11150.	22897.	35660.	41591.	32992.	16849.	4969.	943.	251.	
1135:	162.	130.	131.	142.	129.	108.	116.	95.	108.
1301:	45.	58.	61.	49.	58.	46.	37.	40.	41.
1310:	30.	43.	51.	49.	43.	60.	50.	44.	47.
1319:	35.	33.	30.	38.	31.	44.	30.	45.	51.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	8952.	4977.	2.90	1022.62	1012	21	1.492E 01	1.5
2	1	564.24	170794.	5385.	1.96	1128.80	1118	20	2.847E 02	0.2
3	1	602.90	10395.	1296.	1.98	1206.07	1199	16	1.732E 01	1.1
4	1	645.97	676.	720.	2.07	1292.14	1285	15	1.127E 00	6.8

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 \*\*\*\*\* 10 1980 12:55:11 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0291A3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8756.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1902:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2636.	4961.	0.0709	0.0016	2.2
%-ANTIMONY	564.2	2817.	96411.	0.5866	0.0021	0.4
%-ARSENIC	657.4	309.	0. <	0.0049	NOT DETECTABLE	

1009:	144.	150.	136.	126.	131.	152.	162.	158.	206.
1018:	314.	394.	577.	816.	885.	968.	777.	642.	431.
1027:	295.	191.	182.	132.	118.	116.	124.	112.	120.

1117:	200.	239.	228.	271.	294.	348.	434.	803.	2156.
1126:	6152.	13121.	20017.	23383.	18784.	9519.	2722.	510.	105.
1135:	61.	51.	65.	61.	74.	36.	58.	43.	52.

1301:	30.	22.	21.	21.	23.	21.	30.	26.	21.
1310:	23.	21.	20.	25.	23.	27.	26.	31.	30.
1319:	30.	16.	16.	22.	22.	20.	20.	16.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	4961.	2636.	2.86	1022.60	1012	21	8.269E 00	2.0
2	1	564.24	96411.	2817.	1.96	1128.81	1119	19	1.607E 02	0.3
3	1	607.90	6088.	1066.	2.00	1206.07	1195	29	1.015E 01	1.5
4	1	646.05	321.	537.	2.04	1292.31	1282	19	5.355E-01	11.6

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 \*\*\*\*\* 10 1980 12:56:19 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291B1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13440.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1913:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL I-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4940.	8382.	0.0788	0.0014	1.8
%-ANTIMONY	564.2	4955.	144417.	0.5735	0.0018	0.3
%-ARSENIC	657.4	512.	0. <	0.0041	NOT DETECTABLE	

1009:	214.	192.	219.	238.	217.	235.	230.	293.	328.
1018:	442.	683.	957.	1283.	1534.	1550.	1351.	1047.	700.
1027:	432.	284.	270.	217.	188.	197.	191.	181.	162.

1117:	326.	381.	474.	450.	476.	498.	678.	1265.	3449.
1126:	9381.	19709.	30129.	34748.	28149.	14173.	4166.	691.	156.
1135:	97.	100.	101.	76.	90.	85.	71.	82.	80.

1301:	35.	43.	38.	33.	37.	42.	32.	32.	37.
1310:	34.	38.	39.	44.	60.	46.	40.	38.	32.
1319:	37.	34.	33.	34.	41.	36.	32.	29.	25.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	8382.	4940.	2.88	1022.61	1011	26	1.397E 01	1.6
2	1	564.24	144417.	4955.	1.97	1128.80	1120	18	2.407E 02	0.3
3	1	602.91	8830.	1240.	2.01	1206.08	1198	23	1.472E 01	1.2
4	1	646.08	537.	632.	2.04	1292.36	1287	16	8.944E-01	7.9

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 12:57:24 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0291B2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 14726.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 9JAN80 1923:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4520.	9086.	0.0787	0.0013	1.7
%-ANTIMONY	564.2	5757.	160430.	0.5826	0.0017	0.3
%-ARSENIC	657.4	583.	0. <	0.0040	NOT DETECTABLE	

1009:	256.	242.	231.	237.	244.	243.	257.	329.	380.
1018:	527.	777.	1058.	1428.	1680.	1743.	1502.	1054.	751.
1027:	509.	355.	274.	228.	191.	190.	203.	210.	211.

1117:	358.	444.	490.	532.	525.	561.	742.	1424.	3843.
1126:	10336.	21501.	33254.	39014.	31403.	16046.	4770.	874.	200.
1135:	160.	127.	104.	104.	86.	98.	85.	85.	92.

1301:	47.	46.	53.	49.	56.	38.	46.	34.	40.
1310:	37.	38.	45.	58.	46.	49.	60.	53.	44.
1319:	32.	40.	41.	42.	40.	36.	37.	41.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1.	1.	511.07	9086.	4520.	2.82	1022.54	1012	21	1.514E 01	1.5
2.	1.	564.25	160430.	5757.	1.96	1128.82	1120	19	2.674E 02	0.3
3.	1.	602.91	9764.	1143.	2.03	1206.08	1196	18	1.627E 01	1.1
4.	1.	645.90	615.	644.	2.16	1292.00	1285	14	1.024E 00	7.1

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 \*\*\*\*\* 10 1980 12:58:35 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291B3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9441.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1934:30 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2910.	5296.	0.0722	0.0016	2.2
%-ANTIMONY	564.2	2848.	95995.	0.5447	0.0020	0.4
%-ARSENIC	657.4	304.	0. <	0.0046	NOT DETECTABLE	

1009:	128.	143.	137.	142.	163.	148.	158.	175.	236.
1018:	319.	454.	629.	872.	1035.	1074.	892.	674.	434.
1027:	279.	195.	154.	155.	128.	123.	133.	138.	112.
1117:	212.	265.	278.	276.	275.	328.	433.	841.	2213.
1126:	6111.	12885.	20058.	23128.	18924.	9438.	2788.	515.	78.
1135:	49.	59.	57.	58.	53.	46.	64.	53.	58.
1301:	32.	27.	17.	21.	20.	20.	25.	21.	22.
1310:	23.	15.	20.	24.	28.	29.	26.	25.	22.
1319:	22.	18.	30.	15.	23.	23.	21.	19.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	5296.	2910.	2.71	1022.56	1014	20	8.827E 00	2.0
2	1	564.25	95995.	2848.	1.96	1128.82	1120	17	1.600E 02	0.3
3	1	602.92	5776.	653.	2.02	1206.10	1196	18	9.626E 00	1.5
4	1	646.00	536.	403.	2.40	1292.20	1286	23	8.931E-01	6.8

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 12:59:46 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291C1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 14763.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1944:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	5896.	6224.	0.0548	0.0013	2.3
Z-ANTIMONY	564.2	5490.	196973.	0.7161	0.0020	0.3
Z-ARSENIC	657.4	700.	0. <	0.0044	NOT DETECTABLE	

1009:	282.	272.	290.	297.	298.	318.	273.	326.	365.
1018:	423.	626.	897.	1095.	1325.	1270.	1146.	900.	612.
1027:	450.	326.	315.	260.	264.	255.	265.	234.	200.

1117:	375.	419.	464.	506.	530.	679.	920.	1713.	4742.
1126:	12579.	26357.	41262.	47679.	38234.	19267.	5868.	1125.	275.
1135:	165.	169.	151.	153.	134.	141.	144.	114.	132.

1301:	68.	42.	48.	42.	45.	49.	52.	66.	51.
1310:	46.	57.	48.	54.	64.	45.	50.	53.	61.
1319:	52.	61.	58.	57.	61.	48.	49.	54.	56.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	6224.	5896.	2.81	1022.54	1015	22	1.037E 01	2.2
2	1	564.24	196973.	5490.	1.96	1128.81	1118	20	3.283E 02	0.2
3	1	602.87	12284.	1612.	1.98	1206.01	1196	22	2.047E 01	1.0
4	1	646.07	847.	1951.	2.04	1292.34	1284	35	1.412E 00	8.1

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 \*\*\*\*\* 10 JAN 1980 1:00:55 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291C2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8840.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 1955:34 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3487.	4171.	0.0619	0.0016	2.7
%-ANTIMONY	564.2	3256.	115507.	0.7026	0.0024	0.3
%-ARSENIC	657.4	342.	0. <	0.0053	NOT DETECTABLE	

1009:	165.	164.	154.	174.	155.	158.	183.	223.	212.
1018:	268.	402.	558.	701.	804.	856.	725.	598.	389.
1027:	297.	198.	179.	132.	111.	131.	145.	150.	155.
1117:	214.	266.	268.	296.	324.	419.	566.	978.	2637.
1126:	7386.	15371.	24025.	27471.	22647.	11560.	3424.	615.	116.
1135:	83.	85.	74.	60.	56.	56.	66.	70.	48.
1301:	28.	19.	28.	27.	31.	25.	28.	26.	21.
1310:	31.	23.	25.	36.	26.	28.	28.	30.	26.
1319:	24.	15.	29.	28.	28.	27.	23.	21.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	4171.	3487.	2.88	1022.59	1013	22	6.952E 00	2.5
2	1	564.25	115507.	3256.	1.98	1128.82	1118	22	1.925E 02	0.3
3	1	602.90	7380.	1125.	1.99	1206.07	1196	26	1.230E 01	1.3
4	1	645.95	443.	660.	1.91	1292.10	1281	19	7.387E-01	9.5

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 \*\*\*\*\* 10 JAN 1980 1:02:01 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291C3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12373.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2006:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3767.	5517.	0.0591	0.0013	2.2
%-ANTIMONY	564.2	4330.	159643.	0.6951	0.0021	0.3
%-ARSENIC	657.4	490.	0. <	0.0045	NOT DETECTABLE	

1009:	249.	239.	223.	195.	214.	203.	239.	256.	305.
1018:	344.	517.	691.	955.	1099.	1065.	925.	783.	521.
1027:	349.	270.	248.	212.	193.	191.	195.	236.	218.

1117:	325.	344.	373.	433.	451.	551.	763.	1441.	3839.
1126:	10043.	21572.	33155.	38609.	31019.	15746.	4590.	867.	213.
1135:	125.	120.	99.	98.	97.	101.	84.	99.	95.

1301:	43.	46.	39.	45.	44.	46.	41.	41.	27.
1310:	49.	30.	42.	35.	41.	43.	48.	41.	33.
1319:	26.	34.	41.	31.	33.	42.	44.	32.	49.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	5517.	3767.	2.89	1022.56	1013	19	9.195E 00	2.1
2	1	564.24	159643.	4330.	1.96	1128.81	1118	20	2.661E 02	0.3
3	1	602.89	9880.	1170.	1.99	1206.06	1196	20	1.647E 01	1.1
4	1	646.09	615.	846.	1.98	1292.37	1284	19	1.026E 00	7.8
5	1	668.80	144.	402.	2.39	1337.77	1333	11	2.405E-01	21.3



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 \*\*\*\*\* 10 1980 1:03:08 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0291D1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10756.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2016:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3801.	5677.	0.0706	0.0015	2.2
%-ANTIMONY	564.2	819.	133670.	0.6708	0.0021	0.3
%-ARSENIC	657.4	575.	175.	0.0086	0.0018	21.0

1009:	209.	199.	194.	183.	219.	204.	210.	217.	264.
1018:	347.	541.	706.	886.	1098.	1072.	967.	745.	518.
1027:	377.	267.	190.	189.	200.	179.	168.	164.	192.

1117:	422.	555.	606.	626.	509.	562.	653.	1142.	3146.
1126:	8468.	17735.	27633.	32188.	25852.	13352.	4012.	727.	185.
1135:	107.	82.	74.	78.	95.	98.	80.	75.	69.

1301:	25.	35.	30.	32.	23.	35.	27.	33.	34.
1310:	41.	35.	34.	50.	65.	69.	63.	50.	40.
1319:	31.	40.	28.	30.	28.	22.	38.	21.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	5677.	3801.	2.94	1022.57	1012	21	9.462E 00	2.0
2	2	560.26	2199.	1194.	2.19	1120.86	1109	29	3.664E 00	3.1
3	2	564.25	133670.	819.	1.97	1128.82	1109	29	2.228E 02	0.3
4	1	602.90	8553.	932.	2.01	1206.07	1197	18	1.425E 01	1.2
5	1	646.11	578.	574.	2.18	1292.43	1286	17	9.636E-01	7.2
6	1	657.38	175.	575.	2.13	1314.94	1307	19	2.912E-01	20.8

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 \*\*\*\*\* 10 JAN 1980 1:04:21 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291D2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 1.6584.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1.

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2027:09 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.1	6958.	9294.	0.0757	0.0014	1.8
%-ANTIMONY	564.2	1812.	247393.	0.8067	0.0020	0.3
%-ARSENIC	657.2	884.	451.	0.0145	0.0016	10.7

1009:	371.	378.	366.	334.	345.	368.	383.	469.	543.
1018:	625.	893.	1143.	1561.	1831.	1800.	1629.	1227.	873.
1027:	627.	495.	389.	378.	339.	336.	342.	295.	291.

1117:	966.	1183.	1410.	1313.	1079.	942.	1151.	2123.	6060.
1126:	16157.	33631.	51154.	59244.	47574.	24031.	7281.	1445.	382.
1135:	257.	247.	241.	229.	221.	166.	168.	179.	185.

1301:	81.	68.	71.	72.	91.	68.	67.	69.	76.
1310:	75.	77.	94.	141.	167.	177.	121.	104.	92.
1319:	68.	73.	63.	95.	72.	60.	71.	66.	80.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.08	9294.	6958.	2.87	1022.57	1013	22	1.549E 01	1.6
2	3	560.22	4920.	2711.	2.42	1120.76	1108	35	8.200E 00	2.1
3	3	564.23	247393.	1812.	1.98	1128.79	1108	35	4.123E 02	0.2
4	1	602.90	15662.	2002.	2.01	1206.08	1197	17	2.610E 01	0.9
5	1	646.12	1134.	1415.	2.17	1292.44	1283	20	1.891E 00	5.6
6	1	657.19	451.	884.	2.02	1314.56	1308	13	7.510E-01	10.5
7	1	668.27	194.	867.	2.59	1336.70	1333	12	3.230E-01	22.7

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 \*\*\*\*\* 10 JAN 1980 1:05:33 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0291D3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 14907.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2037:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	6669.	7138.	0.0653	0.0014	2.2
%-ANTIMONY	564.2	1433.	186773.	0.6788	0.0019	0.3
%-ARSENIC	657.2	897.	195.	0.0070	0.0016	23.0

1009:	281.	267.	266.	294.	278.	291.	282.	322.	333.
1018:	475.	651.	933.	1242.	1432.	1349.	1215.	989.	681.
1027:	486.	381.	279.	277.	264.	234.	234.	247.	232.

1117:	622.	787.	832.	814.	747.	751.	924.	1574.	4345.
1126:	12067.	24811.	38951.	45190.	36333.	18201.	5493.	1069.	280.
1135:	160.	146.	145.	146.	136.	120.	107.	97.	90.

1301:	56.	55.	50.	55.	60.	50.	58.	49.	57.
1310:	48.	64.	46.	86.	85.	97.	87.	68.	52.
1319:	41.	42.	42.	56.	53.	50.	49.	44.	44.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	7138.	6669.	2.89	1022.53	1011	26	1.190E 01	2.0
2	2	562.14	3256.	2026.	2.40	1124.62	1111	35	5.427E 00	2.6
3	2	564.24	186773.	1433.	1.96	1128.81	1111	35	3.113E 02	0.2
4	1	602.90	11622.	1350.	1.97	1206.07	1196	18	1.937E 01	1.0
5	1	646.09	811.	1045.	2.29	1292.37	1285	22	1.352E 00	6.6
6	1	657.19	195.	897.	2.16	1314.56	1307	17	3.253E-01	22.8

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 \*\*\*\*\* 10 JAN 1980 1:06:46 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291E1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 16118.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2048:33 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.1	5292.	7470.	0.0638	0.0013	2.0
%-ANTIMONY	564.2	1417.	193724.	0.6524	0.0018	0.3
%-ARSENIC	656.8	542.	115.	0.0038	0.0012	30.2

1009:	306.	290.	268.	272.	257.	287.	331.	320.	403.
1018:	473.	691.	955.	1156.	1358.	1420.	1320.	995.	730.
1027:	483.	343.	308.	250.	271.	235.	233.	256.	269.

1117:	568.	656.	740.	717.	709.	761.	945.	1705.	4526.
1126:	12378.	26009.	40489.	46371.	37304.	19207.	5775.	1106.	263.
1135:	192.	150.	160.	155.	137.	143.	126.	128.	130.

1301:	55.	46.	44.	53.	49.	48.	62.	54.	54.
1310:	44.	62.	57.	64.	78.	89.	77.	52.	46.
1319:	52.	53.	49.	51.	48.	55.	55.	45.	46.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.14	7470.	5292.	3.02	1022.68	1012	21	1.245E 01	1.8
2	2	560.19	2089.	1902.	2.21	1120.72	1109	29	3.482E 00	3.7
3	2	564.24	193724.	1417.	1.97	1128.80	1109	29	3.229E 02	0.2
4	1	602.89	12071.	1568.	2.00	1206.05	1195	19	2.012E 01	1.0
5	1	645.99	720.	2023.	1.99	1292.18	1286	29	1.214E 00	9.5
6	1	656.78	115.	542.	2.76	1313.75	1314	9	1.919E-01	30.1

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 1:07:58 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291E2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10390.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2059:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*

\*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4388.	4518.	0.0604	0.0016	2.7
%-ANTIMONY	564.2	826.	125885.	0.6589	0.0021	0.3
%-ARSENIC	657.4	490.	0. <	0.0055	NOT DETECTABLE	

1009:	155.	165.	181.	168.	189.	190.	190.	229.	241.
1018:	315.	451.	591.	766.	905.	904.	793.	626.	413.
1027:	309.	244.	167.	162.	167.	166.	149.	158.	136.

1117:	359.	466.	514.	463.	457.	475.	594.	1065.	2822.
1126:	7906.	16804.	26216.	30215.	24597.	12415.	3760.	617.	155.
1135:	102.	85.	97.	76.	70.	79.	70.	60.	71.

1301:	39.	27.	34.	24.	32.	26.	29.	33.	24.
1310:	39.	33.	37.	48.	50.	48.	49.	43.	23.
1319:	33.	27.	36.	26.	25.	37.	30.	28.	25.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	4518.	4388.	2.86	1022.53	1012	26	7.530E 00	2.6
2	2	564.24	125885.	826.	1.96	1128.82	1107	30	2.098E 02	0.3
3	2	590.69	1955.	-38.	2.41	1181.67	1107	30	3.258E 00	2.2
4	1	602.91	7987.	1294.	2.03	1206.09	1194	25	1.331E 01	1.3
5	1	646.19	522.	730.	2.06	1292.58	1283	20	8.697E-01	8.5

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 1:09:06 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0291E3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13367.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2109:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4147.	6294.	0.0661	0.0014	2.1
%-ANTIMONY	564.2	1140.	164932.	0.6723	0.0020	0.3
%-ARSENIC	657.4	429.	155.	0.0063	0.0013	20.6

1009:	261.	235.	226.	233.	202.	238.	243.	301.	342.
1018:	414.	594.	821.	1065.	1196.	1169.	1077.	793.	628.
1027:	409.	302.	226.	229.	206.	232.	216.	188.	189.

1117:	460.	591.	712.	632.	627.	602.	802.	1384.	3843.
1126:	10440.	21930.	34226.	39592.	32155.	16277.	4901.	918.	207.
1135:	139.	123.	109.	124.	110.	119.	119.	84.	76.

1301:	40.	50.	43.	39.	33.	42.	45.	40.	38.
1310:	39.	44.	39.	57.	66.	81.	58.	54.	44.
1319:	46.	37.	42.	39.	40.	35.	38.	43.	45.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	6294.	4147.	3.00	1022.51	1013	19	1.049E 01	1.9
2	2	563.20	2344.	1554.	2.41	1126.73	1109	29	3.906E 00	3.2
3	2	564.24	164932.	1140.	1.97	1128.82	1109	29	2.749E 02	0.2
4	1	602.90	10051.	1392.	1.99	1206.08	1198	19	1.675E 01	1.1
5	1	646.06	638.	724.	1.97	1292.33	1286	15	1.063E 00	7.2
6	1	657.43	155.	429.	2.06	1315.04	1310	11	2.590E-01	20.5

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 \*\*\*\*\* 10 JAN 1980 1:10:14 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291F1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8801.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2120:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER	511.1	2781.	4058.	0.0653	0.0017	2.6
%-ANTIMONY	564.3	3672.	121149.	0.7514	0.0025	0.3
%-ARSENIC	657.4	365.	0. <	0.0057	NOT DETECTABLE	

1009:	167.	163.	157.	163.	166.	154.	148.	179.	239.
1018:	269.	401.	524.	693.	843.	838.	728.	532.	398.
1027:	291.	192.	166.	146.	159.	139.	156.	148.	182.

1117:	262.	276.	331.	337.	382.	425.	554.	1054.	2857.
1126:	7664.	16120.	25186.	29234.	23837.	12115.	3655.	692.	156.
1135:	92.	71.	79.	69.	70.	81.	72.	63.	57.

1301:	41.	25.	29.	42.	32.	24.	33.	23.	19.
1310:	19.	20.	39.	27.	34.	32.	27.	30.	36.
1319:	24.	27.	31.	28.	32.	22.	27.	30.	23.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR
1	1	511.07	4058.	2781.	2.77	1022.54	1014	18	6.764E 00	2.4
2	1	564.25	121149.	3672.	1.96	1128.83	1120	18	2.019E 02	0.3
3	1	602.91	7636.	824.	1.96	1206.09	1197	18	1.273E 01	1.3
4	1	646.07	518.	363.	2.15	1292.34	1287	12	8.630E-01	6.8

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 \*\*\*\*\* 10 1980 1:11:22 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291F2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10838.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2130:46 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3960.	4873.	0.0643	0.0016	2.5
%-ANTIMONY	564.3	3800.	136975.	0.6912	0.0022	0.3
%-ARSENIC	657.4	467.	0. <	0.0052	NOT DETECTABLE	

1009:	201.	194.	197.	190.	194.	196.	205.	216.	260.
1018:	324.	474.	663.	815.	991.	978.	853.	627.	470.
1027:	338.	267.	222.	180.	192.	185.	165.	168.	157.

1117:	277.	336.	299.	370.	432.	475.	610.	1116.	3028.
1126:	8591.	18277.	28232.	32927.	27027.	13757.	4184.	786.	158.
1135:	90.	83.	92.	73.	79.	80.	89.	86.	70.

1301:	50.	42.	36.	34.	27.	29.	34.	31.	28.
1310:	44.	31.	35.	30.	40.	39.	44.	41.	36.
1319:	36.	35.	28.	41.	35.	30.	31.	36.	35.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	4873.	3960.	2.84	1022.50	1012	22	8.122E 00	2.3
2	1	564.25	136975.	3800.	1.97	1128.84	1119	19	2.283E 02	0.3
3	1	602.91	8889.	1076.	1.99	1206.10	1195	21	1.481E 01	1.2
4	1	646.11	575.	529.	1.94	1292.42	1286	14	9.586E-01	7.0



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 \*\*\*\*\* 10 1980 1:12:30 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 0291F3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13483.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2141:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4413.	5936.	0.0636	0.0014	2.2
%-ANTIMONY	564.2	5250.	170812.	0.6941	0.0020	0.3
%-ARSENIC	657.4	565.	0. <	0.0046	NOT DETECTABLE	

1009:	262.	232.	242.	269.	229.	261.	264.	273.	344.
1018:	430.	581.	737.	1025.	1193.	1167.	1103.	799.	613.
1027:	426.	312.	255.	244.	205.	226.	212.	229.	228.

1117:	382.	404.	448.	473.	559.	610.	782.	1460.	4010.
1126:10989.	22760.	35397.	41599.	33164.	16993.	5041.	960.	244.	
1135:	164.	127.	139.	125.	130.	118.	108.	117.	104.

1301:	43.	43.	55.	52.	32.	33.	35.	42.	40.
1310:	33.	36.	36.	44.	51.	43.	59.	58.	52.
1319:	38.	41.	34.	39.	42.	37.	41.	40.	45.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	5936.	4413.	2.86	1022.64	1013	19	9.894E 00	2.0
2	1	564.24	170812.	5250.	1.96	1128.82	1118	20	2.847E 02	0.2
3	1	602.89	10854.	1206.	2.00	1206.06	1196	18	1.809E 01	1.1
4	1	646.12	722.	831.	1.89	1292.45	1283	19	1.204E 00	6.8

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 \*\*\*\*\* 10 1 1980 1:13:36 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 029101  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13510.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2151:51 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4221.	8155.	0.0880	0.0016	1.8
%-ANTIMONY	564.2	4779.	138406.	0.5624	0.0018	0.3
%-ARSENIC	657.4	498.	0. <	0.0044	NOT DETECTABLE	

1009:	202.	211.	210.	211.	198.	237.	228.	261.	329.
1018:	427.	611.	960.	1279.	1530.	1444.	1326.	997.	687.
1027:	440.	296.	237.	198.	196.	189.	165.	148.	196.

1117:	317.	415.	447.	405.	470.	473.	679.	1101.	3101.
1126:	8743.	18479.	28986.	33662.	26933.	14096.	4304.	811.	182.
1135:	111.	84.	97.	76.	78.	84.	87.	66.	62.

1301:	35.	44.	46.	27.	40.	43.	31.	30.	35.
1310:	33.	33.	38.	47.	48.	48.	45.	36.	36.
1319:	37.	38.	24.	41.	33.	33.	22.	30.	38.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	8155.	4221.	2.86	1022.58	1011	23	1.359E 01	1.6
2	1	564.25	138406.	4779.	1.96	1128.83	1120	19	2.307E 02	0.3
3	1	602.91	8592.	900.	1.99	1206.09	1198	16	1.432E 01	1.2
4	1	646.05	579.	638.	2.01	1292.30	1286	15	9.655E-01	7.4

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 \*\*\*\*\* 10 1980 1:14:41 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 029162  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8610.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2202:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 612. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2265.	4866.	0.0831	0.0018	2.2
%-ANTIMONY	564.3	2912.	87213.	0.5571	0.0021	0.4
%-ARSENIC	657.4	283.	0. <	0.0052	NOT DETECTABLE	

1009:	143.	139.	133.	140.	122.	138.	146.	167.	209.
1018:	268.	384.	558.	779.	871.	873.	776.	617.	413.
1027:	268.	196.	159.	126.	108.	99.	92.	112.	100.

1117:	194.	270.	268.	278.	276.	319.	435.	754.	1973.
1126:	5498.	11617.	18007.	21055.	17166.	8961.	2475.	440.	98.
1135:	50.	45.	39.	62.	43.	45.	46.	49.	45.

1301:	24.	17.	22.	22.	10.	23.	16.	13.	19.
1310:	17.	15.	19.	36.	22.	26.	29.	19.	15.
1319:	19.	23.	24.	12.	17.	17.	18.	19.	17.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	4866.	2265.	2.93	1022.61	1013	20	8.110E 00	2.0
2	1	564.26	87213.	2912.	1.97	1128.84	1120	18	1.454E 02	0.3
3	1	602.92	5500.	537.	1.92	1206.11	1196	19	9.167E 00	1.5
4	1	646.15	391.	332.	2.15	1292.50	1287	16	6.510E-01	8.3

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 1:15:52 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291G3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7862.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2212:47 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 610. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2021.	4255.	0.0804	0.0018	2.3
%-ANTIMONY	564.3	2588.	75137.	0.5266	0.0021	0.4
%-ARSENIC	657.4	258.	0. <	0.0055	NOT DETECTABLE	

1009:	114.	97.	101.	93.	110.	111.	114.	151.	174.
1018:	247.	337.	472.	678.	750.	852.	668.	499.	381.
1027:	266.	130.	125.	106.	108.	94.	97.	90.	95.

1117:	193.	183.	245.	246.	270.	274.	330.	613.	1682.
1126:	4701.	9960.	15523.	18048.	14888.	7790.	2329.	399.	74.
1135:	45.	36.	46.	38.	23.	42.	43.	26.	47.

1301:	14.	16.	13.	11.	19.	18.	18.	21.	15.
1310:	15.	16.	18.	28.	25.	18.	23.	21.	18.
1319:	27.	19.	15.	17.	15.	17.	16.	18.	13.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	4255.	2021.	2.81	1022.61	1012	21	7.091E 00	2.1
2	1	564.26	75137.	2588.	1.97	1128.85	1120	18	1.252E 02	0.4
3	1	602.95	4824.	502.	1.97	1206.16	1198	17	8.039E 00	1.6
4	1	645.97	306.	594.	1.84	1292.13	1287	27	5.106E-01	12.6

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 1:16:59 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291H1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11589.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2223:09 \* FWHM(13X2) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3766.	6176.	0.0799	0.0017	2.1
%-ANTIMONY	564.3	4261.	122516.	0.5835	0.0019	0.3
%-ARSENIC	657.4	413.	0. <	0.0047	NOT DETECTABLE	

1009:	187.	163.	181.	176.	187.	174.	177.	203.	234.
1010:	348.	522.	735.	922.	1081.	1197.	1033.	769.	579.
1027:	338.	257.	179.	176.	162.	143.	141.	163.	135.

1117:	302.	374.	379.	378.	390.	419.	571.	962.	2719.
1126:	7737.	16088.	25581.	29637.	24279.	12530.	3671.	738.	180.
1135:	105.	74.	72.	62.	78.	74.	72.	61.	77.

1301:	32.	29.	29.	32.	26.	31.	42.	24.	25.
1310:	25.	27.	37.	37.	39.	36.	30.	40.	33.
1319:	32.	29.	23.	32.	39.	37.	25.	25.	28.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.14	6176.	3766.	2.95	1022.69	1012	23	1.029E 01	1.9
2	1	564.26	122516.	4261.	1.96	1128.84	1120	19	2.042E 02	0.3
3	1	602.94	7810.	898.	1.97	1206.14	1196	19	1.302E 01	1.3
4	1	646.06	616.	546.	2.19	1292.32	1284	21	1.027E 00	6.7

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 1:18:07 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291H2  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10350.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2233:39 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*

\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	2856.	5821.	0.0851	0.0017	2.0
%-ANTIMONY	564.3	3645.	110152.	0.5885	0.0020	0.3
%-ARSENIC	657.4	382.	0. <	0.0051	NOT DETECTABLE	

1009:	174.	137.	141.	133.	172.	165.	170.	177.	235.
1018:	358.	481.	675.	866.	1079.	1047.	954.	734.	484.
1027:	338.	217.	198.	159.	134.	138.	132.	137.	142.

1117:	283.	289.	339.	346.	389.	379.	512.	898.	2536.
1126:	6800.	14554.	22707.	26796.	21658.	11437.	3493.	665.	142.
1135:	79.	73.	65.	60.	67.	72.	60.	39.	49.

1301:	23.	33.	27.	23.	20.	25.	20.	33.	30.
1310:	34.	26.	21.	22.	38.	35.	30.	32.	23.
1319:	26.	33.	32.	24.	26.	19.	27.	25.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	5821.	2856.	2.91	1022.61	1012	21.9	701E 00	1.8
2	1	564.26	110152.	3645.	1.96	1128.85	1120	18.1	836E 02	0.3
3	1	602.94	6941.	950.	1.99	1206.14	1196	20.1	157F 01	1.4
4	1	646.08	415.	472.	2.26	1292.36	1284	17.6	911E-01	8.9

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 1:19:16 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q291H3  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9178.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2244:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3395.	4759.	0.0792	0.0019	2.4
%-ANTIMONY	564.3	3137.	93791.	0.5662	0.0021	0.4
%-ARSENIC	657.4	300.	0. <	0.0051	NOT DETECTABLE	

1009:	152.	134.	128.	147.	161.	143.	156.	175.	178.
1018:	293.	388.	547.	754.	859.	856.	752.	641.	418.
1027:	281.	204.	135.	132.	128.	115.	102.	121.	118.

1117:	195.	249.	297.	272.	304.	355.	438.	771.	2124.
1126:	5827.	12267.	19250.	22803.	18768.	9592.	2837.	576.	100.
1135:	66.	44.	63.	65.	48.	44.	52.	51.	42.

1301:	19.	19.	17.	26.	19.	31.	19.	18.	13.
1310:	17.	20.	23.	23.	34.	28.	31.	22.	26.
1319:	19.	30.	14.	19.	20.	17.	20.	16.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.12	4759.	3395.	2.98	1022.64	1011	28	7.932E 00	2.3
2	1	564.27	93791.	3137.	1.96	1128.86	1120	18	1.563E 02	0.3
3	1	602.90	6053.	594.	1.95	1206.07	1195	19	1.009E 01	1.4
4	1	645.93	400.	404.	2.10	1292.06	1282	21	6.660E-01	8.7

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 1:20:24 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q29111  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 13041.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2254:31 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	3638.	6947.	0.0822	0.0016	1.9
Z-ANTIMONY	564.3	908.	129109.	0.5495	0.0018	0.3
Z-ARSENIC	657.4	428.	0. <	0.0043	NOT DETECTABLE	

1009:	210.	197.	181.	183.	207.	206.	200.	240.	264.
1018:	423.	555.	829.	1097.	1273.	1290.	1152.	882.	587.
1027:	370.	288.	203.	191.	165.	166.	163.	162.	166.
1117:	313.	363.	416.	372.	377.	432.	612.	1075.	2882.
1126:	8103.	16818.	26993.	31007.	25374.	12921.	4019.	728.	145.
1135:	103.	107.	95.	75.	77.	81.	72.	73.	60.
1301:	33.	40.	20.	27.	32.	22.	34.	26.	26.
1310:	27.	21.	36.	28.	33.	42.	37.	37.	37.
1319:	23.	42.	39.	32.	30.	27.	38.	26.	32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	6947.	3638.	2.87	1022.60	1012	21	1.158E 01	1.7
2	2	560.30	1039.	1217.	2.19	1120.94	1111	39	1.732E 00	5.7
3	2	564.25	129109.	908.	1.96	1128.83	1111	39	2.152E 02	0.3
4	1	602.92	8244.	954.	2.06	1206.11	1196	18	1.374E 01	1.2
5	1	645.98	544.	599.	2.26	1292.17	1284	21	9.060E-01	7.7
6	1	669.46	77.	320.	2.22	1339.09	1335	10	1.279E-01	34.9



\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 1:21:32 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q29112  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11122.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2305:02 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*

\*  
 DETECTOR: GEL 1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3200.	6046.	0.0846	0.0017	2.0
%-ANTIMONY	564.3	3805.	108529.	0.5426	0.0019	0.3
%-ARSENIC	657.4	343.	0. <	0.0046	NOT DETECTABLE	

1009:	156.	146.	126.	150.	162.	138.	169.	196.	241.
1010:	326.	479.	677.	911.	1108.	1098.	916.	776.	496.
1027:	324.	219.	161.	161.	144.	156.	124.	151.	122.

1117:	261.	324.	339.	338.	341.	369.	525.	896.	2434.
1126:	6740.	14393.	22414.	26442.	21524.	11058.	3283.	586.	133.
1135:	73.	68.	52.	67.	57.	63.	60.	56.	69.

1301:	32.	27.	25.	23.	29.	25.	26.	19.	29.
1310:	28.	22.	31.	29.	35.	22.	27.	14.	30.
1319:	26.	22.	28.	33.	22.	27.	25.	28.	11.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	6046.	3200.	2.91	1022.61	1011	25	1.008E 01	1.8
2	1	564.26	108529.	3805.	1.95	1128.85	1120	19	1.809E 02	0.3
3	1	602.92	6974.	735.	2.01	1206.11	1196	20	1.162E 01	1.3
4	1	646.01	505.	497.	1.98	1292.23	1285	17	8.413E-01	7.7

\*\*\*\*\*  
 \*\*\*\*\* 10 JAN 1980 1:22:37 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: Q29113  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12805.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2315:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003003 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.1	3817.	6764.	0.0830	0.0016	2.0
%-ANTIMONY	564.3	4230.	127345.	0.5540	0.0018	0.3
%-ARSENIC	657.4	415.	0. <	0.0044	NOT DETECTABLE	

1009:	215.	190.	181.	195.	208.	187.	223.	250.	264.
1018:	379.	553.	723.	1094.	1265.	1326.	1115.	846.	627.
1027:	352.	287.	217.	184.	164.	149.	160.	158.	184.

1117:	310.	401.	388.	384.	427.	459.	572.	1048.	2738.
1126:	8060.	16884.	26347.	30982.	25061.	13034.	3783.	710.	197.
1135:	101.	83.	92.	76.	74.	64.	64.	82.	75.

1301:	38.	38.	25.	30.	37.	46.	33.	36.	24.
1310:	26.	26.	31.	37.	32.	37.	40.	41.	35.
1319:	26.	24.	36.	33.	28.	24.	30.	28.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.13	6764.	3817.	2.81	1022.66	1012	22	1.127E 01	1.8
2	1	564.26	127345.	4230.	1.96	1128.84	1120	18	2.122E 02	0.3
3	1	602.93	8299.	922.	1.97	1206.13	1195	19	1.383E 01	1.2
4	1	646.13	499.	529.	2.11	1292.46	1285	14	8.324E-01	7.9

\*\*\*\*\*  
 \*\*\*\*\* 10 1980 1:23:44 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S626G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9395.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2325:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*

\*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	3050.	4689.	0.0792	0.0019	2.4
Z-ANTIMONY	564.3	4425.	120222.	0.7142	0.0024	0.3
Z-ARSENIC	657.4	370.	0. <	0.0056	NOT DETECTABLE	

1009:	154.	186.	176.	153.	178.	164.	183.	208.	257.
1018:	293.	415.	595.	826.	948.	946.	806.	582.	461.
1027:	306.	208.	196.	145.	165.	146.	155.	180.	159.
1117:	271.	335.	372.	380.	392.	379.	541.	998.	2584.
1126:	7348.	16065.	25131.	29195.	23868.	12211.	3645.	682.	131.
1135:	86.	85.	60.	60.	67.	66.	54.	62.	57.
1301:	22.	35.	31.	27.	29.	35.	24.	21.	20.
1310:	23.	33.	31.	35.	37.	45.	30.	32.	17.
1319:	18.	25.	24.	30.	21.	28.	25.	29.	29.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	4689.	3050.	2.77	1022.52	1013	19	7.815E 00	2.2
2	1	564.26	120222.	4425.	1.95	1128.84	1120	20	2.004E 02	0.3
3	1	602.91	4380.	736.	1.97	1206.08	1195	19	7.301E 00	1.7
4	1	646.03	302.	357.	2.07	1292.26	1287	14	5.030E-01	10.6

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 \*\*\*\*\* 10 1980 1:24:51 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: 5626H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7786.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 9JAN80 2336:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
%-COPPER	511.1	2205.	4141.	0.0852	0.0020	2.4
%-ANTIMONY	564.3	648.	98848.	0.7099	0.0025	0.4
%-ARSENIC	657.4	325.	0. <	0.0064	NOT DETECTABLE	

1009:	146.	142.	144.	135.	126.	139.	140.	164.	183.
1018:	242.	335.	514.	659.	747.	757.	759.	554.	352.
1027:	251.	166.	158.	114.	115.	143.	133.	132.	105.

1117:	250.	268.	363.	363.	337.	353.	440.	810.	2149.
1126:	6041.	12887.	20540.	23681.	19618.	10039.	2950.	521.	128.
1135:	79.	56.	65.	49.	55.	56.	56.	31.	50.

1301:	20.	22.	18.	20.	18.	23.	21.	18.	24.
1310:	19.	34.	24.	19.	35.	36.	25.	34.	26.
1319:	16.	17.	16.	16.	19.	23.	19.	25.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR
1	1	511.14	4141.	2205.	2.90	1022.70	1013	18	6.902E 00	2.2
2	2	564.26	98848.	648.	1.96	1128.85	1113	26	1.647E 02	0.3
3	2	579.26	1445.	-8.	2.39	1158.83	1113	26	2.409E 00	2.6
4	1	602.89	3533.	472.	1.94	1206.05	1199	16	5.889E 00	1.9
5	1	645.98	258.	754.	2.09	1292.16	1283	29	4.305E-01	16.3

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 \*\*\*\*\* 10 1980 1:26:04 PM \*\*\*\*\*  
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91119065 QY RF LEAD

SAMPLE DATE: 8JAN80 1048:00  
 SAMPLE IDENTIFICATION: S626I  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9322.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

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 \*  
 ACQUISITION DATE: 9JAN80 2346:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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\*  
 DETECTOR: GEL 1-8 \* LIBRARY: NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
Z-COPPER	511.1	3361.	4829.	0.0838	0.0020	2.4
Z-ANTIMONY	564.3	4217.	120059.	0.7215	0.0024	0.3
Z-ARSENIC	657.4	389.	0. <	0.0059	NOT DETECTABLE	

1009:	176.	174.	176.	152.	179.	171.	194.	207.	203.
1018:	351.	446.	610.	760.	875.	970.	792.	635.	456.
1027:	323.	209.	184.	179.	177.	151.	132.	151.	138.

1117:	284.	381.	392.	408.	404.	449.	548.	982.	2688.
1126:	7358.	16168.	25186.	29320.	23639.	12099.	3651.	709.	144.
1135:	76.	69.	67.	70.	69.	71.	56.	58.	58.

1301:	22.	30.	35.	29.	29.	28.	24.	29.	26.
1310:	23.	19.	35.	28.	34.	28.	39.	37.	40.
1319:	21.	30.	29.	33.	25.	26.	18.	24.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	511.10	4829.	3361.	2.94	1022.61	1012	22	8.049E 00	2.2
2	1	564.25	120059.	4217.	1.94	1128.83	1120	18	2.001E 02	0.3
3	1	602.94	4460.	937.	1.95	1206.15	1196	23	7.434E 00	1.8
4	1	645.86	314.	375.	2.41	1291.92	1284	14	5.233E-01	10.4

5

Lab# 9119065 SQY

5th Irradiation  
12/20/79  
#  
1110/80

## 91119065 QY RF FIFTH IRRADIATION

SAMPLE	SAM. WT	%-COPPER	%-TIMONY	%-ARSENIC
Q222A	10256.000	0.01153	0.00828	0.18802
Q222B	12375.000	0.01004	0.01384	0.19609
Q222C	10287.000	0.01265	0.00860	0.19732
Q222D	8484.000	0.01272	1.00848	0.26243
Q222E	7246.000	0.01655	1.23398	0.30204
Q222F	8903.000	0.01259	0.04437	0.19014
Q222G	10368.000	0.01138	0.78211	0.19068
Q222H	8009.000	0.00554	5.42477	1.26722
Q222I	8515.000	0.01222	1.07299	0.26000
Q222J	5933.000	0.01585	1.13178	0.27536
Q222K	7218.000	0.01895	2.38258	0.58194
Q222L	8711.000	0.01188	0.00862	0.19639
Q222M	9700.000	0.01276	0.03578	0.19573
Q222N	9779.000	0.01134	0.04183	0.19306
Q222O	9124.000	0.01558	1.95002	0.48051
Q222P	8006.000	0.01340	0.03680	0.19374
Q222Q	8321.000	0.01430	1.03555	0.24062
Q222R	8045.000	0.01455	1.22264	0.29376
Q222S	8163.000	0.01226	0.79332	0.19112
Q222T	8652.000	0.01663	0.72589	0.17270
		0.01354 AVG	1.27211 AVG	0.30344 AVG
		0.002962 SD	1.062786 SD	0.249719 SD
		21.880741 %RSD	83.544899 %RSD	82.295235 %RSD

Q223A	9945.000	0.00991	1.00896	0.26040
Q223B	6360.000	0.01235	0.01869	0.19865
Q223C	6922.000	0.01038	0.00765	0.18720
Q223D	7372.000	0.01488	1.37435	0.32781
Q223E	6348.000	0.00710	5.60154	1.35076
Q223F	7145.000	0.01028	0.79060	0.18404
Q223G	5566.000	0.01132	0.79291	0.19375
Q223H	7719.000	0.01491	0.72912	0.16375
Q223I	6110.000	0.01301	0.02492	0.19213
Q223J	7710.000	0.01304	0.78235	0.18645
Q223K	5883.000	0.00798	5.92930	1.44188
Q223L	6120.000	0.01493	0.76994	0.18769
Q223M	5611.000	0.01437	0.79116	0.19174
Q223N	6722.000	0.01066	2.14784	0.52931
Q223O	6078.000	0.01332	0.75446	0.18250
Q223P	8155.000	0.01330	0.94976	0.23633
Q223Q	5228.000	0.01256	0.01533	0.19362
Q223R	6434.000	0.01313	0.03345	0.19726
Q223S	5488.000	0.01351	0.06479	0.21768
Q223T	6464.000	0.01436	0.05107	0.19400
		0.01323 AVG	1.41591 AVG	0.34065 AVG
		0.002855 SD	1.522599 SD	0.370096 SD
		21.570381 %RSD	107.535027 %RSD	108.581072 %RSD

Q224A	4863.000	0.00890	5.30724	1.35133
Q224B	8218.000	0.01254	0.94577	0.24043
Q224C	8397.000	0.01656	1.98304	0.49172
Q224D	7322.000	0.01532	0.00568	0.17797
Q224E	7770.000	0.01276	0.75722	0.18878
Q224F	8343.000	0.01078	0.97507	0.22804
Q224G	7065.000	0.01190	0.02359	0.19006
Q224H	8409.000	0.01356	0.92981	0.23004
Q224I	6837.000	0.01297	0.78326	0.19105
Q224J	8286.000	0.01240	0.72898	0.18399



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 \*\*\*\*\* 28 DEC 1979 2:26:00 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00

SAMPLE IDENTIFICATION: Q223D

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 7372.000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 21DEC79 713:50 \* FWHM(1332) 2.390

PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000

ELAPSED REAL TIME: 635. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GFLI-8

\* LIBRARY:NUCL.LIB1

DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.2	5171.	1591.	0.0149	0.0010	7.1
Z-ANTIMONY	564.1	2714.	192391.	1.3743	0.0051	0.4
Z-ARSENIC	657.1	1773.	6859.	0.3278	0.0112	3.4

1009:	372.	370.	347.	372.	391.	390.	379.	340.	397.
1010:	409.	446.	461.	554.	565.	573.	575.	478.	467.
1027:	414.	364.	342.	318.	342.	322.	327.	357.	335.

1117:	10322.	12957.	13407.	11089.	7320.	3533.	2030.	3064.	8051.
1126:	18107.	29283.	37203.	37425.	30417.	18473.	7663.	2162.	512.
1135:	279.	246.	253.	211.	200.	207.	218.	217.	202.

1301:	105.	85.	98.	95.	106.	87.	109.	115.	115.
1310:	220.	409.	785.	1194.	1441.	1427.	1105.	671.	345.
1319:	150.	90.	88.	77.	96.	105.	99.	96.	96.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	511.20	1591.	5171.	3.18	1022.82	1016	15	2.651E 00	6.9
2	2	559.14	66952.	3355.	2.34	1118.61	1108	33	1.116E 02	0.4
3	2	564.10	192391.	2714.	2.35	1128.53	1108	33	3.207E 02	0.2
4	1	602.76	5632.	4387.	2.37	1205.79	1194	31	9.386E 00	2.1
5	1	645.92	367.	2050.	2.23	1292.04	1286	20	6.113E-01	18.2
6	1	657.10	6859.	1773.	2.33	1314.38	1306	18	1.143E 01	1.5
7	1	665.56	423.	1110.	2.20	1331.29	1326	12	7.051E-01	12.2



SAMPLE	SAM. WT.	%-COPPER	%-ANTIMONY	%-ARSENIC Part I
S626A	8973.000	0.07933	0.72292	0.00471
S626B	10117.000	0.07604	0.72618	0.00389
S626C	8424.000	0.07896	0.70984	0.00600
<i>see 4227 D. Part II</i>		0.07811 AVG	0.71965 AVG	0.00487 AVG
		0.001804 SD	0.008648 SD	0.001065 SD
		2.309270 %RSD	1.201693 %RSD	21.868130 %RSD
S604A	7408.000	0.00712	1.76136	0.09837
S604B	9335.000	0.00722	1.82154	0.10351
S604C	8764.000	0.00697	1.74553	0.09794
		0.00710 AVG	1.77615 AVG	0.09994 AVG
		0.000129 SD	0.040103 SD	0.003100 SD
		1.812309 %RSD	2.257892 %RSD	3.102238 %RSD
Q274A	9354.000	0.01286	0.77566	0.14656
Q275	7663.000	0.00299	0.79061	0.15592
Q276A	9818.000	0.02101	2.01481	0.01828
Q276B	8762.000	0.02223	2.04225	0.01875
Q276C	9323.000	0.02260	2.03149	0.01394
		0.02194 AVG	2.02952 AVG	0.01699 AVG
		0.000834 SD	0.013822 SD	0.002648 SD
		3.802145 %RSD	0.681047 %RSD	15.585615 %RSD
Q277A	11989.000	0.03105	0.00160	< 0.00088
Q277B	6756.000	0.03183	0.00165	< 0.00199
Q277C	7705.000	0.02921	0.00180	< 0.00167
		0.03070 AVG	0.00168 AVG	0.00000 AVG
		0.001343 SD	0.000103 SD	0.000000 SD
		4.374203 %RSD	6.138560 %RSD	0.000000 %RSD
Q278A	9530.000	0.00208	0.03177	< 0.00118
Q278B	12522.000	0.00246	0.03186	< 0.00113
Q278C	10425.000	0.00224	0.03036	< 0.00134
		0.00226 AVG	0.03133 AVG	0.00000 AVG
		0.000191 SD	0.000839 SD	0.000000 SD
		8.467975 %RSD	2.679137 %RSD	0.000000 %RSD
Q279	12781.000	0.03173	0.00135	< 0.00098
Q280	6122.000	0.03165	0.00169	< 0.00212
Q281A	6871.000	0.03028	0.67452	0.01001
Q281B	3815.000	0.05249	0.74784	< 0.00464
		0.04139 AVG	0.71118 AVG	0.01001 AVG
		0.015708 SD	0.051839 SD	0.000000 SD
		37.954273 %RSD	7.289213 %RSD	0.000000 %RSD
Q306	9904.000	0.00396	0.76758	0.16154

Q307	9371.000	0.00319	0.75372	0.14983
Q308	8982.000	0.00381	0.76963	0.16209
Q309	11117.000	0.00500	0.71757	0.14144
Q310	9123.000	0.00399	0.74908	0.14336
Q311	9118.000	0.00119	0.62483	0.11242
Q312	9292.000	0.00465	0.75629	0.16451
Q313A	9715.000	0.05274	0.83089	0.00378
Q313B	8555.000	0.05677	0.86193	0.00403
Q313C	9281.000	0.05657	0.84148	0.00386
		0.05536 AVG	0.84477 AVG	0.00000 AVG
		0.002273 SD	0.015781 SD	0.000000 SD
		4.105274 %RSD	1.868031 %RSD	0.000000 %RSD
Q314A	8934.000	0.04487	0.78188	0.01128
Q314B	9534.000	0.04370	0.79837	0.00376
Q314C	10027.000	0.04630	0.79748	0.00382
		0.04496 AVG	0.79258 AVG	0.01128 AVG
		0.001299 SD	0.009276 SD	0.000000 SD
		2.890093 %RSD	1.170354 %RSD	0.000000 %RSD
Q315A	8670.000	0.03548	0.72140	0.01189
Q315B	10397.000	0.03581	0.72643	0.00789
Q315C	8299.000	0.03705	0.74092	0.00824
		0.03611 AVG	0.72959 AVG	0.00934 AVG
		0.000830 SD	0.010133 SD	0.002217 SD
		2.299055 %RSD	1.388876 %RSD	23.741421 %RSD
Q316	2118.000	0.08374	0.74377	0.02070
Q317	1837.000	0.05423	0.71042	0.01195
Q318	354.000	0.10301	0.74040	0.04492
Q319	564.000	0.08465	0.75329	0.03268
Q320A	10169.000	0.05410	0.66280	0.00322
Q320B	10541.000	0.05516	0.68155	0.00335
Q320C	9273.000	0.05267	0.61564	0.00341
		0.05398 AVG	0.65333 AVG	0.00000 AVG
		0.001252 SD	0.033958 SD	0.000000 SD
		2.318804 %RSD	5.197755 %RSD	0.000000 %RSD
Q321A	9532.000	0.05698	0.61817	0.00698
Q321B	8523.000	0.05487	0.62803	0.00504
Q321C	10394.000	0.05700	0.61501	0.00514
		0.05628 AVG	0.62040 AVG	0.00572 AVG
		0.001225 SD	0.006792 SD	0.001095 SD
		2.176145 %RSD	1.094805 %RSD	19.140076 %RSD

Q322A	10854.000	0.05388	0.61873	0.00823
Q322B	9793.000	0.05592	0.64765	0.00629
Q322C	9368.000	0.05440	0.60	0.00356
		0.05473 AVG	0.62509 AVG	0.00726 AVG
		0.001061 SD	0.020145 SD	0.003944 SD
		1.937700 %RSD	3.222703 %RSD	54.323101 %RSD
Q261A	9290.000	0.02986	2.07209	0.00700
Q261B	9084.000	0.02773	2.10440	0.00712
Q261C	9200.000	0.02613	1.90461	0.01012
		0.02790 AVG	2.02703 AVG	0.01012 AVG
		0.001870 SD	0.107244 SD	0.000000 SD
		6.703309 %RSD	5.290682 %RSD	0.000000 %RSD
Q347AR	9517.000	0.05234	0.01889	0.00159
Q347AB	10602.000	0.04956	0.01946	0.00149
Q347AC	9162.000	0.05149	0.01891	0.00172
		0.05113 AVG	0.01909 AVG	0.000000 AVG
		0.001424 SD	0.000326 SD	0.000000 SD
		2.704124 %RSD	1.705728 %RSD	0.000000 %RSD
Q347BA	8951.000	0.05097	0.01883	0.00174
Q347BB	8889.000	0.04910	0.02020	0.00189
Q347BC	8577.000	0.04874	0.01749	0.00178
		0.04960 AVG	0.01884 AVG	0.000000 AVG
		0.001199 SD	0.001353 SD	0.000000 SD
		2.416853 %RSD	7.181580 %RSD	0.000000 %RSD
Q291G2	8610.000	0.05969	0.44739	0.00577
Q291G3	7862.000	0.06065	0.43641	0.00621
Q291H1	11589.000	0.05759	0.46676	0.00508
Q291H2	10350.000	0.05759	0.42807	0.00532
Q291H3	9178.000	0.05613	0.44945	0.00563
Q291I1	13041.000	0.06858	0.45290	0.00479
Q291I2	11122.000	0.06688	0.44559	0.00528
Q291I3	12805.000	0.06438	0.44345	0.00467
S626D	7500.000	0.07723	0.73946	0.00475
S626E	8555.000	0.07882	0.72872	0.00665
S626F	9037.000	0.07784	0.69679	0.00424
S604D	9268.000	0.00479	1.22080	0.10491
S604E	10383.000	0.00419		

(TI)TITLE: 91119065 QY RF FIFTH IRRADIATION  
 (LN)LIBRARY:  
 (SA)SAMPLE TIME: 20DEC79 1021:00  
 (SE)STD ENERGY TOLERANCE: 2.00  
 (UE)UNK ENERGY TOLERANCE: 2.00  
 (TF)THERMAL FLUX: 0.0000E-01  
 (EF)EPITHERMAL FLUX: 0.0000E-01  
 (FF)FAST FLUX: 0.0000E-01  
 (QU)UNITS: UG

	ELEMENT	ENERGY	HALF-LIFE	SEC
1	Z-COPPER	511.00	1.2800E 01 H	4.6000E 04
2	Z-ANTIMONY	564.09	2.7200E 00 D	2.3501E 05
3	Z-ARSENIC	657.41	2.6300E 01 H	9.4680E 04

# STANDARD SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626A	8973.00	FB11 .A01	100.0	100000.0
2	S626B	10117.00	FB11 .A02	100.0	100000.0
3	S626C	8424.00	FB11 .A03	100.0	100000.0
4	S604A	7408.00	FB11 .A04	100.0	100000.0
5	S604B	9335.00	FB11 .A05	100.0	100000.0
6	S604	8764.00	FB11 .A06	100.0	100000.0

STD: 1 S626A FILE= FB11 .A01

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	7.8000E-02	0.0000E-01
2	Z-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	Z-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 2 S626B FILE= FB11 .A02

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	7.8000E-02	0.0000E-01
2	Z-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	Z-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 3 S626C FILE= FB11 .A03

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	7.8000E-02	0.0000E-01
2	Z-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	Z-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 4 S604A FILE= FB11 .A04

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	0.0000E-01	0.0000E-01
2	Z-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	Z-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 5 S604B FILE= FB11 .A05

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511. 00	0. 0000E-01	0. 0000E-01
2	%-ANTIMONY	564. 00	0. 0000E-01	0. 0000E-01
3	%-ARSENIC	657. 41	1. 0000E-01	0. 0000E-01

STD: 6 5604

FILE= FBI1 .A06

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511. 00	0. 0000E-01	0. 0000E-01
2	%-ANTIMONY	564. 00	0. 0000E-01	0. 0000E-01
3	%-ARSENIC	657. 41	1. 0000E-01	0. 0000E-01

# UNKNOWN SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	5626A	8973. 00	FBI1 .A01	100. 0	100000. 0
2	5626B	10117. 00	FBI1 .A02	100. 0	100000. 0
3	5626C	8424. 00	FBI1 .A03	100. 0	100000. 0
4	5604A	7408. 00	FBI1 .A04	100. 0	100000. 0
5	5604B	9335. 00	FBI1 .A05	100. 0	100000. 0
6	5604C	8764. 00	FBI1 .A06	100. 0	100000. 0
7	Q274A	9354. 00	FBI1 .A13	100. 0	100000. 0
8	Q275	7663. 00	FBI1 .A14	100. 0	100000. 0
9	Q276A	9818. 00	FBI1 .A15	100. 0	100000. 0
10	Q276B	8762. 00	FBI1 .A16	100. 0	100000. 0
11	Q276C	9323. 00	FBI1 .A17	100. 0	100000. 0
12	Q277A	11989. 00	FBI1 .A18	100. 0	100000. 0
13	Q277B	6756. 00	FBI1 .A19	100. 0	100000. 0
14	Q277C	7705. 00	FBI1 .A20	100. 0	100000. 0
15	Q278A	9530. 00	FBI1 .A21	100. 0	100000. 0
16	Q278B	12522. 00	FBI1 .A22	100. 0	100000. 0
17	Q278C	10425. 00	FBI1 .A23	100. 0	100000. 0
18	Q279	12781. 00	FBI1 .A24	100. 0	100000. 0
19	Q280	6122. 00	FBI1 .A25	100. 0	100000. 0
20	Q281A	6871. 00	FBI1 .A26	100. 0	100000. 0
21	Q281B	3815. 00	FBI1 .A27	100. 0	100000. 0
22	Q306	9904. 00	FBI1 .A28	100. 0	100000. 0
23	Q307	9371. 00	FBI1 .A29	100. 0	100000. 0
24	Q308	8982. 00	FBI1 .A30	100. 0	100000. 0
25	Q309	11117. 00	FBI1 .A31	100. 0	100000. 0
26	Q310	9123. 00	FBI1 .A32	100. 0	100000. 0
27	Q311	9118. 00	FBI1 .A33	100. 0	100000. 0
28	Q312	9292. 00	FBI1 .A34	100. 0	100000. 0
29	Q313A	9715. 00	FBI1 .A35	100. 0	100000. 0
30	Q313B	8555. 00	FBI1 .A36	100. 0	100000. 0
31	Q313C	9281. 00	FBI1 .A37	100. 0	100000. 0
32	Q314A	8934. 00	FBI1 .A38	100. 0	100000. 0
33	Q314B	9534. 00	FBI1 .A39	100. 0	100000. 0
34	Q314C	10027. 00	FBI1 .A40	100. 0	100000. 0
35	Q315A	8670. 00	FBI1 .A41	100. 0	100000. 0
36	Q315B	10397. 00	FBI1 .A42	100. 0	100000. 0
37	Q315C	8299. 00	FBI1 .A43	100. 0	100000. 0
38	Q316	2118. 00	FBI1 .A44	100. 0	100000. 0
39	Q317	1837. 00	FBI1 .A45	100. 0	100000. 0
40	Q318	354. 00	FBI1 .A46	100. 0	100000. 0
41	Q319	564. 00	FBI1 .A47	100. 0	100000. 0
42	Q320A	10169. 00	FBI1 .A48	100. 0	100000. 0
43	Q320B	10541. 00	FBI1 .A49	100. 0	100000. 0
44	Q320C	9273. 00	FBI1 .A50	100. 0	100000. 0
45	Q321A	9532. 00	FBI1 .A51	100. 0	100000. 0
46	Q321B	8523. 00	FBI1 .A52	100. 0	100000. 0
47	Q321C	10394. 00	FBI1 .A53	100. 0	100000. 0
48	Q322A	10854. 00	FBI1 .A54	100. 0	100000. 0
49	Q322B	9793. 00	FBI1 .A55	100. 0	100000. 0

50	Q322C	9368.00	FBI1	A56	100.0	100000.0
51	Q261A	9290.00	FBI1	A57	100.0	100000.0
52	Q261B	9294.00	FBI1	A58	100.0	100000.0
53	Q261C	9290.00	FBI1	A59	100.0	100000.0
54	Q347A0	9517.00	FBI1	A60	100.0	100000.0
55	Q347AB	10602.00	FBI1	A61	100.0	100000.0
56	Q347AC	9162.00	FBI1	A62	100.0	100000.0
57	Q347BA	8951.00	FBI1	A63	100.0	100000.0
58	Q347BB	8889.00	FBI1	A64	100.0	100000.0
59	Q347BC	8577.00	FBI1	A65	100.0	100000.0
60	Q222A	10256.00	FBI1	A66	100.0	100000.0
61	Q222B	12375.00	FBI1	A67	100.0	100000.0
62	Q222C	10287.00	FBI1	A68	100.0	100000.0
63	Q222D	8484.00	FBI1	A69	100.0	100000.0
64	Q222E	7246.00	FBI1	A70	100.0	100000.0
65	Q222F	8903.00	FBI1	A71	100.0	100000.0
66	Q222G	10368.00	FBI1	A72	100.0	100000.0
67	Q222H	8009.00	FBI1	A73	100.0	100000.0
68	Q222I	8515.00	FBI1	A74	100.0	100000.0
69	Q222J	5933.00	FBI1	A75	100.0	100000.0
70	Q222K	7218.00	FBI1	A76	100.0	100000.0
71	Q222L	8711.00	FBI1	A77	100.0	100000.0
72	Q222M	9700.00	FBI1	A78	100.0	100000.0
73	Q222N	9779.00	FBI1	A79	100.0	100000.0
74	Q222O	9124.00	FBI1	A80	100.0	100000.0
75	Q222P	8006.00	FBI1	A81	100.0	100000.0
76	Q222Q	8321.00	FBI1	A82	100.0	100000.0
77	Q222R	8045.00	FBI1	A83	100.0	100000.0
78	Q222S	8163.00	FBI1	A84	100.0	100000.0
79	Q222T	8652.00	FBI1	A85	100.0	100000.0
80	Q223A	9945.00	FBI1	A86	100.0	100000.0
81	Q223B	6360.00	FBI1	A87	100.0	100000.0
82	Q223C	6922.00	FBI1	A88	100.0	100000.0
83	Q223D	7372.00	FBI1	A89	100.0	100000.0
84	Q223E	6348.00	FBI1	A90	100.0	100000.0
85	Q223F	7145.00	FBI1	A91	100.0	100000.0
86	Q223G	5566.00	FBI1	A92	100.0	100000.0
87	Q223H	7719.00	FBI1	A93	100.0	100000.0
88	Q223I	6110.00	FBI1	A94	100.0	100000.0
89	Q223J	7710.00	FBI1	A95	100.0	100000.0
90	Q223K	5883.00	FBI1	A96	100.0	100000.0
91	Q223L	6120.00	FBI1	A97	100.0	100000.0
92	Q223M	5611.00	FBI1	A98	100.0	100000.0
93	Q223N	6722.00	FBI1	A99	100.0	100000.0
94	Q223O	6078.00	FBI1	A100	100.0	100000.0
95	Q223P	8155.00	FBI1	A101	100.0	100000.0
96	Q223Q	5228.00	FBI1	A102	100.0	100000.0
97	Q223R	6434.00	FBI1	A103	100.0	100000.0
98	Q223S	5488.00	FBI1	A104	100.0	100000.0
99	Q223T	6464.00	FBI1	A105	100.0	100000.0
100	Q224A	4863.00	FBI1	A106	100.0	100000.0
101	Q224B	8218.00	FBI1	A107	100.0	100000.0
102	Q224C	8397.00	FBI1	A108	100.0	100000.0
103	Q224D	7322.00	FBI1	A109	100.0	100000.0
104	Q224E	7770.00	FBI1	A110	100.0	100000.0
105	Q224F	8343.00	FBI1	A111	100.0	100000.0
106	Q224G	7065.00	FBI1	A112	100.0	100000.0
107	Q224H	8409.00	FBI1	A113	100.0	100000.0
108	Q224I	6837.00	FBI1	A114	100.0	100000.0
109	Q224J	8286.00	FBI1	A115	100.0	100000.0
110	Q224K	8086.00	FBI1	A116	100.0	100000.0
111	Q224L	7003.00	FBI1	A117	100.0	100000.0
112	Q224M	6525.00	FBI1	A118	100.0	100000.0
113	Q224N	7827.00	FBI1	A119	100.0	100000.0
114	Q224O	6910.00	FBI1	A120	100.0	100000.0
115	Q224P	6541.00	FBI1	A121	100.0	100000.0

116	Q224Q	6272.00	FBI1	. R122	100.0	100000.0
117	Q224R	6018.00	FBI1	. R123	100.0	100000.0
118	Q224S	7304.00	FBI1	. R124	100.0	100000.0
119	Q224T	5540.00	FBI1	. R125	100.0	100000.0
120	S626E	11377.00	FBI1	. R07	100.0	100000.0
121	S626F	9345.00	FBI1	. R08	100.0	100000.0
122	S626G	11253.00	FBI1	. R09	100.0	100000.0
123	S604E	10231.00	FBI1	. R10	100.0	100000.0
124	S604F	7303.00	FBI1	. R11	100.0	100000.0
125	S604G	6894.00	FBI1	. R12	100.0	100000.0

\*\*\*\*\*  
\*\*\*\*\* 21 DEC 1979 2:44:19 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
SAMPLE IDENTIFICATION: S626A  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 8973.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 20DEC79 1641:52 \* FWHM(1X2) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26DEC79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

\*\*\*\*\*

ENERGY WINDOW 499.787 10 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.00	22607.	6776.	3.15	1022.43	1011	32	3.768E 01	0.8	2.06E 00
2	1	564.14	150379.	5859.	2.34	1128.60	1120	18	2.506E 02	0.3	2.04E 02
3	1	602.78	3903.	1681.	2.28	1205.83	1194	25	6.506E 00	2.2	3.32E 00
4	1	645.65	220.	666.	2.16	1291.51	1285	13	3.662E-01	17.9	1.11E 00
5	1	657.57	167.	380.	1.92	1315.32	1311	10	2.781E-01	18.2	7.74E-01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	22607.	7.8000E-02	0.0000E-01	7.6267E-02	6.4151E-04
Z-ANTIMONY	564.1	150379.	7.2000E-01	0.0000E-01	4.1536E-02	1.1121E-04
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01



\*\*\*\*\*  
\*\*\*\*\* 21 DEC 1979 2:45:30 PM \*\*\*\*\*  
\*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
SAMPLE IDENTIFICATION: 5626B  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 10117.00 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 20DEC79 1652:26 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

\*\*\*\*\*

ENERGY WINDOW 499.787 10 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PM	CTS/SEC	ZERR	FIT
1	1	511.03	24198.	7376.	3.08	1022.47	1011	32	4.033E 01	0.8	4.96E 00
2	9	559.72	2433.	1097.	1.30	1119.78	1111	27	4.055E 00	2.8	1.47E 02
3	9	564.13	169998.	1430.	2.33	1128.58	1111	27	2.033E 02	0.2	
4	1	602.77	4436.	1355.	2.31	1205.81	1195	20	7.393E 00	1.9	1.08E 00
5	1	645.96	262.	900.	2.12	1292.12	1284	15	4.370E-01	17.3	5.07E-01
6	1	657.31	155.	683.	2.38	1314.81	1309	13	2.577E-01	25.2	1.64E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	24198.	7.0000E-02	0.0000E-01	7.3099E-02	5.9619E-04
Z-ANTIMONY	564.1	169998.	7.2000E-01	0.0000E-01	4.1724E-02	1.0204E-04
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

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 \*\*\*\*\* 21 DEC 1979 2:46:37 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: S626C  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 8424.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1703:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE.): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR	FIT
1	1	511.01	20723.	5326.	3.13	1022.42	1011	27	3.454E 01	0.9	2.52E 00
2	9	559.76	1849.	895.	1.29	1119.86	1112	26	3.081E 00	3.3	1.16E 02
3	9	564.14	138105.	1146.	2.33	1128.61	1112	26	2.302E 02	0.3	
4	1	602.80	3643.	1009.	2.42	1205.86	1196	19	6.072E 00	2.1	2.59E 00
5	1	657.00	198.	444.	2.26	1314.18	1310	12	3.296E-01	16.7	1.39E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	20723.	7.0000E-02	0.0000E-01	7.5905E-02	6.4880E-04
Z-ANTIMONY	564.1	138105.	7.2000E-01	0.0000E-01	4.0785E-02	1.1065E-04
Z-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 2:47:47 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: S604A  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 7408.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1713:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 641. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26DEC79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR	FIT
1	1	511.19	1628.	6345.	3.34	1022.79	1015	15	2.713E 00	7.4	2.37E 00
2	2	559.18	29050.	3565.	2.36	1118.70	1107	37	4.842E 01	0.7	1.08E 02
3	2	564.12	300785.	2982.	2.35	1128.58	1107	37	5.013E 02	0.2	
4	1	602.74	8044.	3111.	2.39	1205.76	1195	23	1.341E 01	1.5	3.62E 00
5	1	645.81	733.	1656.	2.92	1291.82	1283	18	1.222E 00	8.7	2.04E 00
6	1	657.19	2836.	1687.	2.38	1314.56	1306	17	4.727E 00	2.8	1.87E 00
7	1	665.28	296.	1267.	3.07	1330.73	1325	14	4.940E-01	17.9	1.57E 00

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	2836.	1.0000E-01	0.0000E-01	7.6667E-03	2.1303E-04

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 2:48:55 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: S604B  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 9335.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1724:32 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 656. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL 1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 10 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	C15/SEC	%ERR	FIT
1	1	511.02	2060.	8291.	3.60	1022.45	1014	15	3.433E 00	6.6	3.54E 00
2	2	559.17	36518.	5274.	2.35	1118.68	1108	32	6.086E 01	0.6	1.56E 02
3	2	564.11	391213.	4738.	2.35	1128.56	1108	32	6.520E 02	0.2	
4	1	602.74	10348.	3914.	2.33	1205.75	1197	17	1.725E 01	1.3	7.49E 00
5	1	646.01	654.	2230.	2.66	1292.21	1286	13	1.090E 00	10.9	6.54E-01
6	1	657.12	3743.	2276.	2.43	1314.43	1307	16	6.230E 00	2.4	8.32E-01

PEAK SEARCH COMPLETED

# STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ARSENIC	657.4	3743.	1.0000E-01	0.0000E-01	8.0678E-03	1.9632E-04

\*\*\*\*\*  
\*\*\*\*\* 21 DEC 1979 2:50:02 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
SAMPLE IDENTIFICATION: 5604  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 8764.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 20DEC79 1735:43 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 649. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*  
\*\*\*\*\*

ENERGY WINDOW 499.787 10 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	511.13	1847.	7928.	3.05	1022.66	1016	16	3.078E 00	7.2	1.57E 00
2	2	559.17	33574.	4311.	2.31	1118.67	1109	33	5.596E 01	0.6	1.47E 02
3	2	564.12	351265.	4070.	2.35	1128.57	1109	33	5.854E 02	0.2	
4	1	602.77	9403.	4152.	2.33	1205.81	1194	24	1.567E 01	1.4	2.53E 00
5	1	645.81	602.	1827.	2.30	1291.82	1286	13	1.003E 00	10.8	8.24E-01
6	1	657.09	3309.	1852.	2.42	1314.37	1308	14	5.514E 00	2.5	2.93E 01
7	1	665.64	265.	1223.	2.28	1331.45	1327	10	4.422E-01	19.6	1.16E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
Z-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
Z-ARSENIC	657.4	3309.	1.0000E-01	0.0000E-01	7.6337E-03	1.9320E-04

# SUMMARY OF STANDARD CONSTANTS:

## 1. ELEMENT %-COPPER AT 511.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.8000E-02	7.6267E-02	6.4151E-04
S626B	7.8000E-02	7.3099E-02	5.9619E-04
S626C	7.8000E-02	7.5905E-02	6.4880E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	7.4984E-02	3.6229E-04

## 2. ELEMENT %-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626A	7.2000E-01	4.1536E-02	1.1121E-04
S626B	7.2000E-01	4.1724E-02	1.0204E-04
S626C	7.2000E-01	4.0785E-02	1.1065E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	4.1369E-02	6.2189E-05

## 3. ELEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604A	1.0000E-01	7.6667E-03	2.1303E-04
S604B	1.0000E-01	8.0678E-03	1.9632E-04
S604	1.0000E-01	7.6337E-03	1.9320E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	7.7940E-03	1.1564E-04

\*\*\*\*\*  
\*\*\*\*\* 21 DEC 1979 2:51:34 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
SAMPLE IDENTIFICATION: 5626A  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 8973.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 20DEC79 1641:52 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6776.	22607.	0.0793	0.0008	1.0
%-ANTIMONY	564.1	5859.	150379.	0.7229	0.0022	0.3
%-ARSENIC	657.6	380.	167.	0.0047	0.0009	18.3

1115:	296.	382.	434.	484.	537.	559.	541.	630.	851.
1124:	1942.	5679.	13467.	22706.	29052.	29331.	24653.	15259.	6294.
1133:	1556.	337.	122.	110.	112.	94.	77.	93.	70.
1115:	296.	382.	434.	484.	537.	559.	541.	630.	851.
1124:	1942.	5679.	13467.	22706.	29052.	29331.	24653.	15259.	6294.
1133:	1556.	337.	122.	110.	112.	94.	77.	93.	70.
1301:	35.	47.	37.	36.	34.	48.	49.	40.	50.
1310:	37.	38.	44.	48.	59.	85.	69.	62.	41.
1319:	45.	34.	43.	37.	47.	56.	40.	40.	42.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	22607.	6776.	3.15	1022.43	1011	32	3.768E 01	0.8
2	1	564.14	150379.	5859.	2.34	1128.60	1120	18	2.506E 02	0.3
3	1	602.78	3903.	1681.	2.28	1205.83	1194	25	6.506E 00	2.2
4	1	645.65	220.	666.	2.16	1291.51	1285	13	3.662E-01	17.9
5	1	657.57	167.	380.	1.92	1315.32	1311	10	2.781E-01	18.2

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 2:52:44 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: S626B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10117.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1652:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	7376.	24198.	0.0760	0.0007	0.9
Z-ANTIMONY	564.1	1430.	169998.	0.7262	0.0021	0.3
Z-ARSENIC	657.3	683.	155.	0.0039	0.0010	25.3

1115:	312.	391.	509.	599.	639.	594.	647.	665.	1005.
1124:	2282.	6497.	15147.	25547.	32761.	33354.	27452.	16869.	6673.
1133:	1829.	364.	165.	127.	147.	115.	106.	112.	102.
1115:	312.	391.	509.	599.	639.	594.	647.	665.	1005.
1124:	2282.	6497.	15147.	25547.	32761.	33354.	27452.	16869.	6673.
1133:	1829.	364.	165.	127.	147.	115.	106.	112.	102.
1301:	57.	63.	50.	53.	45.	57.	47.	50.	46.
1310:	50.	59.	54.	67.	63.	77.	88.	67.	52.
1319:	51.	44.	52.	62.	39.	42.	53.	44.	49.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	24198.	7376.	3.08	1022.47	1011	32	4.033E 01	0.8
2	9	559.72	2433.	1097.	1.30	1119.78	1111	27	4.055E 00	2.8
3	9	564.13	169998.	1430.	2.33	1128.58	1111	27	2.833E 02	0.2
4	1	602.77	4436.	1355.	2.31	1205.81	1195	20	7.393E 00	1.9
5	1	645.96	262.	900.	2.12	1292.12	1284	15	4.370E-01	17.3
6	1	657.31	155.	683.	2.38	1314.81	1309	13	2.577E-01	25.2



\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 2:53:50 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY KF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00

SAMPLE IDENTIFICATION: 5626C

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8424.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 20DEC79 1703:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	5326.	20723.	0.0790	0.0008	1.0
%-ANTIMONY	564.1	1146.	138105.	0.7098	0.0022	0.3
%-ARSENIC	657.0	444.	198.	0.0060	0.0010	16.7

1115:	271.	327.	401.	475.	502.	530.	496.	549.	835.
1124:	1764.	5113.	11888.	20937.	26131.	27386.	22505.	13945.	5793.
1133:	1455.	311.	138.	104.	85.	106.	99.	85.	97.
1115:	271.	327.	401.	475.	502.	530.	496.	549.	835.
1124:	1764.	5113.	11888.	20937.	26131.	27386.	22505.	13945.	5793.
1133:	1455.	311.	138.	104.	85.	106.	99.	85.	97.
1304:	44.	45.	53.	36.	40.	48.	43.	36.	35.
1310:	34.	49.	40.	66.	79.	78.	54.	48.	47.
1310:	48.	43.	38.	41.	45.	49.	42.	49.	39.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.01	20723.	5326.	3.13	1022.42	1011	27	3.454E 01	0.9
2	9	559.76	1849.	895.	1.29	1119.86	1112	26	3.081E 00	3.3
3	9	564.14	138105.	1146.	2.33	1128.61	1112	26	2.302E 02	0.3
4	1	602.80	3643.	1069.	2.42	1205.86	1196	19	6.072E 00	2.1
5	1	657.00	198.	444.	2.26	1314.18	1310	12	3.296E-01	16.7

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 2:54:59 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: 5604A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7408.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1713:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 641. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.2	6345.	1628.	0.0071	0.0005	7.4
Z-ANTIMONY	564.1	2982.	300785.	1.7614	0.0042	0.2
Z-ARSENIC	657.2	1687.	2836.	0.0984	0.0031	3.2

1115:	1464.	2844.	4561.	5743.	5956.	5216.	3594.	2339.	2009.
1124:	4090.	11671.	27018.	45248.	57623.	58596.	48479.	29638.	12229.
1132:	3303.	810.	429.	317.	313.	276.	292.	243.	231.
1115:	1464.	2844.	4561.	5743.	5956.	5216.	3594.	2339.	2009.
1124:	4090.	11671.	27018.	45248.	57623.	58596.	48479.	29638.	12229.
1132:	3303.	810.	429.	317.	313.	276.	292.	243.	231.
1301:	96.	101.	107.	106.	95.	100.	104.	98.	124.
1310:	142.	220.	364.	516.	617.	647.	570.	357.	189.
1319:	131.	90.	97.	100.	102.	76.	100.	98.	94.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.19	1628.	6345.	3.34	1022.79	1015	15	2.713E 00	7.4
2	2	559.18	29050.	3565.	2.36	1118.70	1107	37	4.842E 01	0.7
3	2	564.12	300785.	2982.	2.35	1128.58	1107	37	5.013E 02	0.2
4	1	602.74	8044.	3111.	2.39	1205.76	1195	23	1.341E 01	1.5
5	1	645.81	733.	1656.	2.92	1291.82	1283	18	1.222E 00	8.7
6	1	657.19	2836.	1687.	2.38	1314.56	1306	17	4.727E 00	2.8
7	1	665.28	296.	1267.	3.07	1330.73	1325	14	4.940E-01	17.9

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 2:56:10 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: S604B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9335.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.1AB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1724:32 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 656. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	8291.	2060.	0.0072	0.0005	6.6
Z-ANTIMONY	564.1	4738.	391213.	1.8215	0.0040	0.2
Z-ARSENIC	657.1	2276.	3743.	0.1035	0.0030	2.9

1115:	1918.	3629.	5946.	7285.	7654.	6517.	4692.	2899.	2763.
1124:	5433.	15567.	35532.	59669.	75261.	75977.	62540.	38354.	15804.
1133:	4379.	1116.	632.	555.	475.	445.	454.	462.	395.
1115:	1918.	3629.	5946.	7285.	7654.	6517.	4692.	2899.	2763.
1124:	5433.	15567.	35532.	59669.	75261.	75977.	62540.	38354.	15804.
1133:	4379.	1116.	632.	555.	475.	445.	454.	462.	395.
1304:	162.	174.	173.	161.	181.	167.	138.	157.	188.
1310:	218.	306.	525.	736.	813.	854.	699.	462.	293.
1319:	184.	149.	148.	131.	133.	162.	139.	151.	162.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	2060.	8291.	3.60	1022.45	1014	15	3.433E 00	6.6
2	2	559.17	36518.	5274.	2.35	1118.68	1108	32	6.086E 01	0.6
3	2	564.11	391213.	4738.	2.35	1128.56	1108	32	6.520E 02	0.2
4	1	602.74	10348.	3914.	2.33	1205.75	1197	17	1.725E 01	1.3
5	1	646.01	654.	2230.	2.66	1292.21	1286	13	1.090E 00	10.9
6	1	657.12	3743.	2276.	2.43	1314.43	1307	16	6.238E 00	2.4

\*\*\*\*\*  
\*\*\*\*\* 21 DEC 1979 2:57:14 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
SAMPLE IDENTIFICATION: S604C  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 8764.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 20DEC79 1735:43 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 649. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

\*\*\*\*\*  
\*  
DETECTOR: GELT-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	7928.	1847.	0.0070	0.0005	7.2
Z-ANTIMONY	564.1	4070.	351265.	1.7455	0.0040	0.2
Z-ARSENIC	657.1	1852.	3309.	0.0979	0.0029	2.9

1115:	1781.	3422.	5339.	6829.	7186.	5989.	4341.	2671.	2379.
1124:	4962.	13480.	32058.	53228.	67284.	68310.	56377.	34493.	14334.
1133:	3879.	961.	502.	505.	410.	381.	380.	328.	361.
1115:	1781.	3422.	5339.	6829.	7186.	5989.	4341.	2671.	2379.
1124:	4962.	13480.	32058.	53228.	67284.	68310.	56377.	34493.	14334.
1133:	3879.	961.	502.	505.	410.	381.	380.	328.	361.
1301:	163.	137.	120.	129.	144.	152.	144.	119.	132.
1310:	174.	285.	467.	669.	756.	726.	619.	430.	249.
1319:	153.	112.	132.	134.	124.	129.	127.	115.	111.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.13	1847.	7928.	3.05	1022.66	1016	16	3.078E 00	7.2
2	2	559.17	33574.	4311.	2.31	1118.67	1109	33	5.596E 01	0.6
3	2	564.12	351265.	4070.	2.35	1128.57	1109	33	5.854E 02	0.2
4	1	602.77	9403.	4152.	2.33	1205.81	1194	24	1.567E 01	1.4
5	1	645.01	602.	1827.	2.30	1291.82	1286	13	1.003E 00	10.8
6	1	657.09	3309.	1852.	2.42	1314.37	1308	14	5.514E 00	2.5
7	1	665.64	265.	1223.	2.28	1331.45	1327	10	4.422E-01	19.6

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 2:58:20 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q274A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9354.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1746:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5405.	3603.	0.0129	0.0004	3.4
%-ANTIMONY	564.1	2086.	166280.	0.7757	0.0023	0.3
%-ARSENIC	657.1	1543.	5259.	0.1466	0.0033	2.3

1115:	2058.	4408.	7645.	9731.	10467.	8548.	5609.	2942.	1529.
1124:	2392.	6361.	15056.	24758.	31789.	32802.	26836.	16627.	6881.
1133:	1908.	454.	238.	182.	210.	182.	168.	157.	168.
1115:	2058.	4408.	7645.	9731.	10467.	8548.	5609.	2942.	1529.
1124:	2392.	6361.	15056.	24758.	31789.	32802.	26836.	16627.	6881.
1133:	1908.	454.	238.	182.	210.	182.	168.	157.	168.
1301:	84.	98.	98.	94.	90.	98.	101.	98.	135.
1310:	176.	274.	603.	935.	1125.	1121.	868.	544.	256.
1319:	151.	90.	69.	87.	72.	72.	85.	104.	101.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	3603.	5405.	3.13	1022.44	1014	18	6.005E 00	3.3
2	2	559.17	50576.	2320.	2.31	1118.68	1107	34	8.429E 01	0.5
3	2	564.13	166280.	2086.	2.34	1128.59	1107	34	2.771E 02	0.2
4	1	571.66	236.	1970.	2.23	1143.63	1140	13	3.938E-01	27.3
5	1	602.78	4502.	1971.	2.34	1205.82	1198	18	7.504E 00	2.0
6	1	657.11	5259.	1543.	2.29	1314.42	1305	18	8.765E 00	1.7

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 \*\*\*\*\* 21 DEC 1979 2:59:26 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: 0275  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7663.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1757:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	3078.	679.	0.0030	0.0004	12.2
Z-ANTIMONY	564.1	1565.	138583.	0.7906	0.0025	0.3
Z-ARSENIC	657.2	1400.	4562.	0.1559	0.0037	2.4

1115:	1729.	3936.	6736.	8675.	8947.	7658.	5081.	2461.	1345.
1124:	1934.	5262.	12088.	20936.	26381.	27237.	22876.	13922.	5901.
113X:	1657.	346.	163.	133.	158.	131.	137.	123.	129.
1115:	1729.	3936.	6736.	8675.	8947.	7658.	5081.	2461.	1345.
1124:	1934.	5262.	12088.	20936.	26381.	27237.	22876.	13922.	5901.
113X:	1657.	346.	163.	133.	158.	131.	137.	123.	129.
1301:	72.	63.	47.	69.	65.	90.	66.	83.	88.
1310:	145.	299.	499.	751.	956.	915.	815.	491.	231.
1319:	107.	70.	53.	65.	45.	89.	66.	59.	70.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.94	679.	3078.	2.52	1022.29	1017	12	1.131E 00	12.2
2	2	559.18	44835.	1994.	2.34	1118.69	1109	32	7.473E 01	0.5
3	2	564.14	138583.	1565.	2.33	1120.61	1109	32	2.310E 02	0.3
4	1	602.77	3872.	2342.	2.35	1205.81	1197	29	6.453E 00	2.4
5	1	657.16	4562.	1400.	2.39	1314.51	1307	18	7.603E 00	1.9
6	1	665.44	210.	881.	2.00	1331.06	1325	13	3.507E-01	21.1

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 \*\*\*\*\* 21 DEC 1979 3:00:33 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q276A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9818.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1808:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 658. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	11052.	6057.	0.0210	0.0006	2.8
Z-ANTIMONY	564.1	4618.	451615.	2.0148	0.0043	0.2
Z-ARSENIC	657.1	2037.	682.	0.0183	0.0019	10.2

1115:	1026.	1348.	1814.	2133.	2257.	2200.	1927.	1932.	2787.
1124:	6373.	17848.	41339.	69086.	86440.	87718.	71733.	43984.	18022.
1132:	5061.	1360.	735.	670.	551.	521.	498.	460.	447.

1115:	1026.	1348.	1814.	2133.	2257.	2200.	1927.	1932.	2787.
1124:	6373.	17848.	41339.	69086.	86440.	87718.	71733.	43984.	18022.
1132:	5061.	1360.	735.	670.	551.	521.	498.	460.	447.

1301:	173.	139.	145.	149.	122.	158.	159.	146.	155.
1310:	149.	174.	196.	265.	263.	225.	252.	198.	179.
1319:	146.	147.	149.	128.	156.	153.	127.	116.	141.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	6057.	11052.	3.11	1022.45	1014	18	1.010E 01	2.8
2	3	559.35	9847.	5363.	2.57	1119.04	1109	42	1.641E 01	1.5
3	3	564.11	451615.	4618.	2.35	1128.55	1109	42	7.527E 02	0.2
4	1	602.76	11766.	4500.	2.37	1205.79	1196	20	1.961E 01	1.2
5	1	645.88	935.	2500.	2.70	1291.96	1285	16	1.558E 00	8.2
6	1	657.12	682.	2037.	2.66	1314.43	1308	14	1.137E 00	10.1



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\*\*\*\*\* 21 DEC 1979 3:01:34 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
SAMPLE IDENTIFICATION: Q276B  
TYPE OF SAMPLE: UNKNOWN  
SAMPLE QUANTITY: 8762.000 UNITS: UG  
SAMPLE GEOMETRY: .25 IN  
EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
\*  
ACQUISITION DATE: 20DEC79 1819:17 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

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\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	10605.	5663.	0.0222	0.0007	2.9
%-ANTIMONY	564.1	4051.	407724.	2.0422	0.0045	0.2
%-ARSENIC	656.8	1808.	621.	0.0187	0.0020	10.6

1115:	1026.	1348.	1814.	2133.	2257.	2200.	1927.	1932.	2787.
1124:	6373.	17848.	41339.	69086.	86440.	87718.	71733.	43984.	18022.
1133:	5061.	1360.	735.	670.	551.	521.	498.	460.	447.
1115:	1026.	1348.	1814.	2133.	2257.	2200.	1927.	1932.	2787.
1124:	6373.	17848.	41339.	69086.	86440.	87718.	71733.	43984.	18022.
1133:	5061.	1360.	735.	670.	551.	521.	498.	460.	447.
1304:	173.	139.	145.	149.	122.	158.	159.	146.	155.
1310:	149.	174.	196.	265.	263.	225.	252.	198.	179.
1310:	146.	147.	149.	128.	156.	153.	127.	116.	141.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	5663.	10605.	3.18	1022.41	1013	20	9.439E 00	2.9
2	3	559.32	8813.	5231.	2.67	1118.98	1109	35	1.469E 01	1.6
3	3	564.12	407724.	4051.	2.35	1128.57	1109	35	6.795E 02	0.2
4	1	602.76	10993.	3520.	2.41	1205.79	1196	20	1.832E 01	1.2
5	1	645.89	800.	1999.	2.63	1291.98	1286	15	1.333E 00	8.7
6	1	656.80	621.	1808.	2.50	1313.79	1307	15	1.035E 00	10.5



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 \*\*\*\*\* 21 DEC 1979 3:02:38 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: 0276C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9323.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1830:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 656. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	11230.	6065.	0.0226	0.0006	2.8
%-ANTIMONY	564.1	4358.	430695.	2.0315	0.0044	0.2
%-ARSENIC	657.0	2020.	489.	0.0139	0.0019	13.8

1115:	976.	1279.	1770.	1989.	2129.	2023.	1834.	1877.	2562.
1124:	5980.	16536.	38809.	64932.	82194.	84111.	69373.	42511.	17596.
1133:	5058.	1294.	709.	600.	499.	466.	444.	436.	445.
1115:	976.	1279.	1770.	1989.	2129.	2023.	1834.	1877.	2562.
1124:	5980.	16536.	38809.	64932.	82194.	84111.	69373.	42511.	17596.
1133:	5058.	1294.	709.	600.	499.	466.	444.	436.	445.
1301:	167.	159.	132.	125.	135.	136.	148.	150.	140.
1310:	139.	166.	188.	244.	244.	233.	210.	189.	152.
1319:	123.	112.	148.	131.	133.	132.	145.	136.	106.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	6065.	11230.	3.06	1022.46	1012	20	1.011E 01	2.8
2	3	559.35	9522.	5509.	2.63	1119.03	1108	41	1.587E 01	1.5
3	3	564.12	430695.	4358.	2.35	1128.58	1108	41	7.178E 02	0.2
4	1	602.77	11298.	3264.	2.32	1205.82	1198	16	1.883E 01	1.2
5	1	645.90	712.	1992.	2.56	1292.00	1286	13	1.187E 00	9.6
6	1	657.04	489.	2020.	2.16	1314.26	1308	14	8.154E-01	13.8

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 \*\*\*\*\* 21 DEC 1979 3:03:34 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q277A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11989.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1841:33 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	ZERROR
Z-COPPER	511.1	469.	10615.	0.0311	0.0003	1.1
Z-ANTIMONY	564.1	160.	435.	0.0016	0.0001	6.3
Z-ARSENIC	657.4	63.	0.	< 8.8231E-04	NOT DETECTABLE	

1115:	976.	1279.	1770.	1989.	2129.	2023.	1834.	1877.	2562.
1124:	5980.	16536.	38809.	64932.	82194.	84111.	69373.	42511.	17596.
1132:	5058.	1294.	709.	600.	499.	466.	444.	436.	445.
1115:	976.	1279.	1770.	1989.	2129.	2023.	1834.	1877.	2562.
1124:	5980.	16536.	38809.	64932.	82194.	84111.	69373.	42511.	17596.
1132:	5058.	1294.	709.	600.	499.	466.	444.	436.	445.
1304:	167.	159.	132.	125.	135.	136.	148.	150.	140.
1310:	139.	166.	188.	244.	244.	233.	210.	189.	152.
1319:	123.	112.	148.	131.	133.	132.	145.	136.	106.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR
1	1	511.08	10615.	469.	3.11	1022.56	1011.	25	1.769E-01	1.0
2	1	564.14	435.	160.	2.32	1128.62	1121	22	7.252E-01	6.3

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 \*\*\*\*\* 21 DEC 1979 3:04:32 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: 0277B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6756.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1851:48 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	282.	6074.	0.0318	0.0005	1.4
%-ANTIMONY	564.1	150.	252.	0.0016	0.0002	9.3
%-ARSENIC	657.4	104.	0. <	0.0020	NOT DETECTABLE	

1115:	7.	6.	7.	9.	7.	7.	11.	9.	13.
1124:	14.	12.	35.	41.	53.	52.	46.	28.	14.
1133:	6.	12.	13.	10.	6.	7.	8.	5.	11.
1115:	7.	6.	7.	9.	7.	7.	11.	9.	13.
1124:	14.	12.	35.	41.	53.	52.	46.	28.	14.
1133:	6.	12.	13.	10.	6.	7.	8.	5.	11.
1301:	11.	7.	8.	10.	8.	11.	7.	12.	7.
1310:	9.	5.	6.	8.	7.	10.	10.	8.	10.
1319:	8.	8.	8.	13.	10.	9.	5.	8.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	6074.	282.	3.20	1022.52	1011	23	1.012E 01	1.3
2	1	564.05	252.	150.	2.48	1128.43	1117	23	4.199E-01	9.3

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 \*\*\*\*\* 21 DEC 1979 3:05:33 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q277C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7705.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1902:02 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GFLI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	312.	6300.	0.0292	0.0004	1.4
%-ANTIMONY	564.1	116.	313.	0.0018	0.0001	7.5
%-ARSENIC	657.4	94.	0. <	0.0017	NOT DETECTABLE	

1115:	10.	7.	12.	8.	6.	10.	8.	9.	2.
1124:	8.	24.	20.	53.	63.	62.	57.	40.	15.
1133:	5.	9.	2.	4.	11.	9.	9.	5.	8.
1115:	10.	7.	12.	8.	6.	10.	8.	9.	2.
1124:	8.	24.	20.	53.	63.	62.	57.	40.	15.
1133:	5.	9.	2.	4.	11.	9.	9.	5.	8.
1301:	6.	10.	7.	6.	4.	4.	7.	7.	9.
1310:	5.	17.	4.	5.	4.	8.	6.	5.	9.
1319:	8.	7.	7.	3.	8.	7.	9.	4.	3.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	6300.	312.	3.12	1022.55	1011.	24	1.050E 01	1.3
2	1	564.13	313.	116.	2.55	1128.60	1123	15	5.217E-01	7.5

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:06:33 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q278A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9530.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1912:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	281.	550.	0.0021	0.0001	6.1
Z-ANTIMONY	564.2	261.	6834.	0.0318	0.0004	1.3
Z-ARSENIC	657.4	70.	0. <	0.0012	NOT DETECTABLE	

1115:	12.	17.	18.	20.	18.	30.	26.	30.	34.
1124:	73.	218.	588.	1013.	1312.	1335.	1171.	705.	312.
1132:	82.	25.	7.	5.	8.	9.	10.	7.	9.
1115:	12.	17.	18.	20.	18.	30.	26.	30.	34.
1124:	73.	218.	588.	1013.	1312.	1335.	1171.	705.	312.
1132:	82.	25.	7.	5.	8.	9.	10.	7.	9.
1301:	6.	6.	6.	5.	4.	0.	6.	4.	4.
1310:	3.	7.	8.	3.	6.	6.	7.	6.	4.
1319:	3.	5.	8.	3.	6.	5.	5.	5.	2.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	550.	281.	3.02	1022.53	1015	17	9.161E-01	6.1
2	1	564.17	6834.	261.	2.32	1128.67	1119	19	1.139E 01	1.3
3	1	603.01	231.	117.	3.17	1206.29	1196	18	3.851E-01	9.3

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:07:38 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q278B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12522.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1922:31 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	396.	847.	0.0025	0.0001	4.0
%-ANTIMONY	564.2	396.	8988.	0.0319	0.0004	1.1
%-ARSENIC	657.4	112.	0. <	0.0011	NOT DETECTABLE	

1115:	14.	18.	26.	29.	30.	24.	39.	43.	52.
1124:	107.	328.	781.	1300.	1673.	1785.	1468.	986.	431.
1133:	113.	21.	11.	12.	9.	10.	8.	9.	7.
1115:	14.	18.	26.	29.	30.	24.	39.	43.	52.
1124:	107.	328.	781.	1300.	1673.	1785.	1468.	986.	431.
1133:	113.	21.	11.	12.	9.	10.	8.	9.	7.
1301:	6.	4.	13.	5.	7.	9.	4.	6.	12.
1310:	7.	4.	10.	6.	9.	14.	9.	11.	3.
1319:	6.	9.	12.	10.	8.	7.	7.	5.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	847.	396.	3.29	1022.40	1013	22	1.411E 00	4.0
2	1	564.18	8988.	396.	2.37	1128.69	1120	22	1.498E 01	1.1
3	1	602.92	260.	143.	2.39	1206.11	1198	19	4.339E-01	9.0

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:08:37 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q278C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10425.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1932:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	339.	635.	0.0022	0.0001	5.7
%-ANTIMONY	564.2	331.	7119.	0.0304	0.0004	1.2
%-ARSENIC	657.4	108.	0. <	0.0013	NOT DETECTABLE	

1115:	12.	28.	23.	21.	30.	29.	32.	35.	48.
1124:	102.	231.	598.	1043.	1385.	1449.	1240.	719.	314.
1133:	94.	13.	8.	9.	6.	8.	11.	6.	13.
1115:	12.	28.	23.	21.	30.	29.	32.	35.	48.
1124:	102.	231.	598.	1043.	1385.	1449.	1240.	719.	314.
1133:	94.	13.	8.	9.	6.	8.	11.	6.	13.
1301:	6.	9.	8.	8.	13.	9.	12.	7.	4.
1310:	11.	4.	9.	8.	5.	8.	7.	8.	12.
1310:	12.	10.	10.	9.	6.	7.	7.	3.	11.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	635.	339.	3.25	1022.43	1013	23	1.058E 00	5.7
2	1	564.18	7119.	331.	2.27	1128.68	1118	21	1.186E 01	1.2
3	1	602.75	232.	85.	2.53	1205.77	1200	13	3.862E-01	8.6

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:09:35 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00

SAMPLE IDENTIFICATION: 0279

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 12781.00

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1942:59 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	354.	10938.	0.0317	0.0003	1.1
%-ANTIMONY	564.1	218.	388.	0.0014	0.0001	7.4
%-ARSENIC	657.4	85.	0.	< 9.7824E-04	NOT DETECTABLE	

1115:	11.	14.	14.	7.	6.	9.	5.	6.	14.
1124:	6.	15.	33.	76.	90.	110.	69.	47.	18.
1132:	9.	6.	8.	10.	5.	6.	6.	4.	3.
1115:	11.	14.	14.	7.	6.	9.	5.	6.	14.
1124:	6.	15.	33.	76.	90.	110.	69.	47.	18.
1132:	9.	6.	8.	10.	5.	6.	6.	4.	3.
1301:	5.	2.	6.	7.	6.	6.	4.	5.	6.
1310:	7.	5.	6.	11.	12.	9.	9.	3.	6.
1319:	3.	5.	3.	7.	4.	6.	5.	9.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	10938.	354.	3.11	1022.57	1011	24	1.823E 01	1.0
2	1	526.23	49.	77.	2.80	1052.84	1045	14	8.112E-02	29.2
3	1	564.14	388.	218.	1.93	1128.61	1117	19	6.469E-01	7.4



\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:10:40 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QV RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q280  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6122.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 1953:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	325.	5177.	0.0316	0.0005	1.6
%-ANTIMONY	564.3	119.	232.	0.0017	0.0002	9.3
%-ARSENIC	657.4	91.	0. <	0.0021	NOT DETECTABLE	

1115:	3.	8.	7.	10.	5.	7.	8.	5.	6.
1124:	14.	14.	21.	34.	42.	54.	49.	31.	17.
1132:	9.	13.	4.	4.	5.	5.	3.	10.	10.
1115:	3.	8.	7.	10.	5.	7.	8.	5.	6.
1124:	14.	14.	21.	34.	42.	54.	49.	31.	17.
1132:	9.	13.	4.	4.	5.	5.	3.	10.	10.
1304:	2.	9.	10.	2.	9.	5.	3.	5.	8.
1310:	7.	7.	4.	5.	9.	6.	8.	10.	6.
1319:	9.	5.	7.	13.	8.	5.	3.	2.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	5177.	325.	3.19	1022.59	1012	25	8.629E-00	1.5
2	1	564.32	232.	119.	2.31	1128.97	1120	25	3.863E-01	9.3
3	1	622.88	39.	208.	4.82	1246.00	1227	26	6.580E-02	54.1

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:11:42 PM \*\*\*\*\*  
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GSR

SAMPLE DATE: 22OCT79 1038:00  
 SAMPLE IDENTIFICATION: STD1  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 1.000000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2003:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 1.750KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	3042.	5508.	0.0303	0.0006	2.0
Z-ANTIMONY	564.2	700.	103679.	0.6745	0.0023	0.3
Z-ARSENIC	657.4	506.	249.	0.0100	0.0014	14.4

1115:	258.	402.	544.	566.	658.	607.	529.	496.	581.
1124:	1256.	3629.	8716.	15233.	19495.	20537.	17210.	10921.	4322.
1133:	1152.	207.	81.	62.	61.	55.	60.	53.	55.
1115:	258.	402.	544.	566.	658.	607.	529.	496.	581.
1124:	1256.	3629.	8716.	15233.	19495.	20537.	17210.	10921.	4322.
1133:	1152.	207.	81.	62.	61.	55.	60.	53.	55.
1301:	25.	32.	33.	31.	42.	35.	34.	30.	22.
1310:	20.	33.	50.	67.	66.	77.	78.	52.	38.
1319:	29.	32.	29.	21.	21.	20.	28.	28.	33.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.96	5508.	3042.	3.12	1022.33	1012	24	9.181E 00	2.0
2	3	559.34	3392.	1239.	2.91	1119.01	1107	31	5.654E 00	2.3
3	3	564.17	103679.	700.	2.33	1128.66	1107	31	1.728E 02	0.3
4	1	602.85	2847.	656.	2.50	1205.97	1197	19	4.745E 00	2.3
5	1	657.37	249.	506.	2.30	1314.93	1306	17	4.142E-01	14.3

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:12:51 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00

SAMPLE IDENTIFICATION: 0281B

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 3815.000 UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2013:55 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 600. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2323.	5253.	0.0525	0.0010	2.0
%-ANTIMONY	564.2	1820.	63705.	0.7478	0.0032	0.4
%-ARSENIC	657.4	172.	0. <	0.0046	NOT DETECTABLE	

1115:	115.	115.	140.	154.	148.	185.	221.	245.	341.
1124:	759.	2168.	5368.	9280.	11994.	12610.	10768.	6746.	2831.
1133:	723.	122.	35.	30.	30.	40.	27.	28.	26.
1115:	115.	115.	140.	154.	148.	185.	221.	245.	341.
1124:	759.	2168.	5368.	9280.	11994.	12610.	10768.	6746.	2831.
1133:	723.	122.	35.	30.	30.	40.	27.	28.	26.
1301:	16.	14.	18.	14.	16.	19.	16.	14.	11.
1310:	14.	12.	11.	12.	14.	10.	16.	11.	12.
1319:	18.	9.	22.	15.	16.	19.	13.	16.	12.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	5253.	2323.	3.02	1022.41	1013	23	8.754E 00	1.9
2	1	564.18	63705.	1820.	2.33	1128.69	1118	20	1.062E 02	0.4
3	1	602.90	1724.	472.	2.28	1206.07	1196	23	2.873E 00	3.0

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:13:53 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q306  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9904.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2024:17 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4652.	1020.	0.0040	0.0004	10.0
%-ANTIMONY	564.1	1901.	169433.	0.7676	0.0022	0.3
%-ARSENIC	657.2	1252.	5727.	0.1615	0.0035	2.2

1115:	2046.	4604.	7982.	10542.	11193.	9512.	6254.	3121.	1607.
1124:	2473.	6373.	14556.	25378.	32628.	33803.	28020.	17133.	7168.
1132:	1937.	461.	232.	186.	206.	179.	168.	182.	162.
1115:	2046.	4604.	7982.	10542.	11193.	9512.	6254.	3121.	1607.
1124:	2473.	6373.	14556.	25378.	32628.	33803.	28020.	17133.	7168.
1132:	1937.	461.	232.	186.	206.	179.	168.	182.	162.
1301:	102.	77.	83.	89.	81.	89.	81.	76.	103.
1310:	171.	373.	596.	967.	1089.	1201.	968.	587.	287.
1319:	139.	94.	81.	63.	80.	77.	71.	73.	75.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	1020.	4652.	3.24	1022.48	1015	16	1.700E 00	10.0
2	2	559.20	54745.	2264.	2.31	1118.74	1107	34	9.124E 01	0.4
3	2	564.15	169433.	1901.	2.31	1128.62	1107	34	2.824E 02	0.2
4	1	602.79	4722.	2096.	2.44	1205.85	1195	22	7.870E 00	2.0
5	1	645.92	377.	1120.	2.82	1292.04	1285	14	6.291E-01	13.6
6	1	657.16	5727.	1252.	2.41	1314.50	1307	16	9.545E 00	1.6
7	1	665.78	416.	881.	2.38	1331.73	1326	13	6.928E-01	11.2

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:15:00 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q307  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9371.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2035:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	4436.	768.	0.0032	0.0004	12.8
%-ANTIMONY	564.1	2255.	157123.	0.7537	0.0022	0.3
%-ARSENIC	657.1	1076.	5003.	0.1498	0.0034	2.3

1115:	1861.	4007.	7064.	9127.	9687.	8310.	5480.	2638.	1535.
1124:	2119.	5827.	13743.	23403.	29967.	30864.	25754.	16348.	6781.
1133:	1849.	388.	199.	178.	146.	145.	163.	112.	148.
1115:	1861.	4007.	7064.	9127.	9687.	8310.	5480.	2638.	1535.
1124:	2119.	5827.	13743.	23403.	29967.	30864.	25754.	16348.	6781.
1133:	1849.	388.	199.	178.	146.	145.	163.	112.	148.
1301:	71.	93.	75.	81.	71.	70.	59.	79.	87.
1310:	135.	273.	565.	832.	995.	1048.	833.	516.	254.
1319:	120.	76.	64.	58.	82.	71.	54.	69.	54.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CIS/SEC	%ERR
1	1	510.87	768.	4436.	2.95	1022.14	1013	16	1.281E 00	12.8
2	2	559.20	47293.	2378.	2.31	1118.73	1109	37	7.882E 01	0.5
3	2	564.15	157123.	2255.	2.34	1128.63	1109	37	2.619E 02	0.3
4	1	602.78	4403.	1521.	2.39	1205.82	1196	18	7.338E 00	2.0
5	1	645.93	486.	945.	3.98	1292.05	1286	14	8.106E-01	10.0
6	1	657.14	5003.	1076.	2.37	1314.47	1307	16	8.338E 00	1.7
7	1	665.68	319.	674.	2.38	1331.54	1327	11	5.320E-01	12.8

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:16:06 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q308  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8982.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2045:41 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	4208.	872.	0.0038	0.0004	11.1
%-ANTIMONY	564.2	1958.	153369.	0.7690	0.0023	0.3
%-ARSENIC	657.2	1370.	5163.	0.1621	0.0037	2.3

1115:	1920.	4156.	7467.	9714.	10039.	8735.	5826.	2852.	1562.
1124:	2110.	5542.	13358.	22727.	28976.	30242.	25397.	15836.	6753.
1133:	1762.	418.	199.	175.	172.	176.	128.	143.	150.
1115:	1920.	4156.	7467.	9714.	10039.	8735.	5826.	2852.	1562.
1124:	2110.	5542.	13358.	22727.	28976.	30242.	25397.	15836.	6753.
1133:	1762.	418.	199.	175.	172.	176.	128.	143.	150.
1301:	59.	92.	66.	72.	74.	83.	69.	82.	99.
1310:	158.	269.	535.	803.	1072.	1030.	913.	557.	292.
1310:	112.	80.	81.	67.	76.	75.	53.	62.	72.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.86	872.	4208.	3.09	1022.13	1014	16	1.453E 00	11.1
2	2	559.20	50392.	2127.	2.33	1118.73	1107	35	8.399E 01	0.5
3	2	564.16	153369.	1958.	2.34	1128.64	1107	35	2.556E 02	0.3
4	1	602.80	4188.	1512.	2.30	1205.87	1197	18	6.981E 00	2.0
5	1	645.98	354.	907.	2.74	1292.16	1286	13	5.892E-01	13.2
6	1	657.20	5163.	1370.	2.36	1314.59	1305	21	8.605E 00	1.7
7	1	665.60	353.	783.	2.73	1331.38	1326	13	5.879E-01	12.4

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:17:10 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q309  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11117.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAD1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2056:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 632. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.3	4934.	1404.	0.0050	0.0004	7.6
Z-ANTIMONY	564.1	2046.	176785.	0.7176	0.0020	0.3
Z-ARSENIC	657.2	1610.	5550.	0.1414	0.0032	2.2

1115:	2083.	4595.	7977.	10459.	10839.	9353.	6427.	3058.	1675.
1124:	2378.	6649.	15401.	26321.	33786.	35210.	29084.	17998.	7637.
1133:	2092.	420.	257.	225.	196.	186.	171.	155.	167.
1115:	2083.	4595.	7977.	10459.	10839.	9353.	6427.	3058.	1675.
1124:	2378.	6649.	15401.	26321.	33786.	35210.	29084.	17998.	7637.
1133:	2092.	420.	257.	225.	196.	186.	171.	155.	167.
1301:	88.	95.	97.	82.	99.	72.	92.	88.	109.
1310:	177.	288.	620.	923.	1147.	1193.	946.	591.	280.
1319:	139.	100.	76.	98.	85.	73.	71.	79.	78.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.32	1404.	4934.	4.07	1023.04	1014	17	2.339E 00	7.6
2	2	559.20	54339.	2661.	2.34	1118.73	1107	37	9.056E 01	0.4
3	2	564.15	176785.	2046.	2.32	1128.62	1107	37	2.946E 02	0.2
4	1	602.79	4806.	2085.	2.30	1205.85	1197	20	8.010E 00	2.0
5	1	657.16	5550.	1610.	2.32	1314.51	1305	19	9.250E 00	1.7
6	1	665.38	488.	816.	2.83	1330.94	1325	12	8.138E-01	9.4

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:18:15 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q310  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9123.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2107:09 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 627. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.3	3539.	909.	0.0040	0.0004	9.8
%-ANTIMONY	564.2	1694.	151159.	0.7491	0.0023	0.3
%-ARSENIC	657.2	1202.	4595.	0.1434	0.0034	2.3

1115:	1717.	3844.	6745.	8832.	9216.	7858.	5420.	2590.	1412.
1124:	1995.	5454.	13107.	22304.	28977.	29507.	25226.	15545.	6630.
1133:	1753.	408.	187.	178.	172.	147.	148.	125.	139.
1115:	1717.	3844.	6745.	8832.	9216.	7858.	5420.	2590.	1412.
1124:	1995.	5454.	13107.	22304.	28977.	29507.	25226.	15545.	6630.
1133:	1753.	408.	187.	178.	172.	147.	148.	125.	139.
1301:	70.	67.	65.	78.	91.	69.	76.	82.	72.
1310:	134.	243.	487.	767.	988.	940.	798.	490.	243.
1319:	97.	63.	42.	69.	63.	64.	58.	77.	57.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.25	909.	3539.	3.21	1022.91	1016	14	1.515E 00	9.8
2	2	559.20	45722.	2053.	2.33	1118.74	1108	35	7.620E 01	0.5
3	2	564.16	151159.	1694.	2.33	1128.64	1108	35	2.519E 02	0.3
4	1	602.83	4077.	1428.	2.38	1205.92	1198	17	6.795E 00	2.0
5	1	646.00	260.	813.	2.09	1292.21	1286	12	4.328E-01	16.7
6	1	657.17	4595.	1202.	2.31	1314.52	1307	18	7.658E 00	1.8
7	1	665.76	237.	712.	2.32	1331.70	1327	11	3.949E-01	17.2



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 \*\*\*\*\* 21 DEC 1979 3:19:21 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY KF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q311  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9118.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2117:47 \* FWHM(1332) 2.390  
 PRESET.TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3291.	0.	0.0012	NOT DETECTABLE	
%-ANTIMONY	564.2	1230.	125783.	0.6248	0.0020	0.3
%-ARSENIC	657.2	425.	3584.	0.1124	0.0027	2.4

1115:	1257.	2866.	5080.	6553.	6869.	5883.	4075.	2022.	1129.
1124:	1650.	4380.	10738.	18486.	24067.	24885.	20784.	13076.	5682.
1133:	1584.	309.	118.	112.	118.	126.	103.	98.	94.
1115:	1257.	2866.	5080.	6553.	6869.	5883.	4075.	2022.	1129.
1124:	1650.	4380.	10738.	18486.	24067.	24885.	20784.	13076.	5682.
1133:	1584.	309.	118.	112.	118.	126.	103.	98.	94.
1301:	64.	51.	45.	46.	53.	68.	56.	65.	59.
1310:	97.	198.	380.	589.	734.	727.	604.	376.	200.
1319:	70.	68.	51.	41.	48.	48.	38.	34.	41.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.21	34327.	1733.	2.35	1118.75	1107	35	5.721E 01	0.6
2	2	564.16	125783.	1230.	2.32	1128.65	1107	35	2.096E 02	0.3
3	1	602.84	3400.	1144.	2.28	1205.95	1198	16	5.666E 00	2.2
4	1	645.40	191.	588.	1.97	1291.01	1288	10	3.178E-01	19.4
5	3	657.16	3584.	425.	2.38	1314.51	1304	34	5.974E 00	1.9
6	3	665.51	168.	350.	1.96	1331.20	1304	34	2.803E-01	17.5

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:20:27 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q312  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9292.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2128:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL I-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	4180.	1058.	0.0046	0.0004	9.2
%-ANTIMONY	564.2	1876.	154859.	0.7563	0.0023	0.3
%-ARSENIC	657.2	1178.	5320.	0.1645	0.0036	2.2

1115:	1837.	4080.	7259.	9573.	9956.	8542.	5705.	2766.	1508.
1124:	2080.	5622.	13252.	22875.	29542.	30337.	25615.	16208.	6801.
1132:	1820.	419.	190.	168.	146.	146.	152.	138.	149.
1115:	1837.	4080.	7259.	9573.	9956.	8542.	5705.	2766.	1508.
1124:	2080.	5622.	13252.	22875.	29542.	30337.	25615.	16208.	6801.
1132:	1820.	419.	190.	168.	146.	146.	152.	138.	149.
1301:	77.	89.	68.	76.	77.	59.	70.	79.	108.
1310:	148.	250.	548.	858.	1080.	1046.	907.	600.	245.
1319:	104.	62.	69.	80.	69.	51.	61.	52.	64.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.16	1058.	4180.	3.31	1022.73	1014	16	1.764E 00	9.2
2	2	559.20	49245.	2098.	2.31	1118.73	1108	31	8.207E 01	0.5
3	2	564.16	154859.	1876.	2.34	1128.65	1108	31	2.581E 02	0.3
4	1.	602.80	4299.	1492.	2.37	1205.87	1197	17	7.165E 00	2.0
5	1.	645.93	227.	1517.	2.18	1292.07	1280	18	3.779E-01	25.2
6	1.	657.19	5320.	1178.	2.38	1314.57	1306	19	8.867E 00	1.6
7	1.	665.53	365.	717.	2.69	1331.23	1326	12	6.091E-01	11.6

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:21:30 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q313A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9715.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2139:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELT-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	5060.	12444.	0.0527	0.0007	1.3
%-ANTIMONY	564.2	7196.	177545.	0.8309	0.0024	0.3
%-ARSENIC	657.4	718.	0. <	0.0038	NOT DETECTABLE	

1115:	325.	411.	510.	524.	635.	650.	658.	740.	964.
1124:	2218.	6166.	14921.	26291.	33977.	36097.	29777.	18938.	7784.
113%:	2053.	420.	184.	119.	108.	100.	130.	103.	98.
1115:	325.	411.	510.	524.	635.	650.	658.	740.	964.
1124:	2218.	6166.	14921.	26291.	33977.	36097.	29777.	18938.	7784.
113%:	2053.	420.	184.	119.	108.	100.	130.	103.	98.
1301:	47.	35.	45.	50.	46.	34.	40.	34.	45.
1310:	65.	47.	60.	69.	58.	69.	70.	46.	54.
1319:	39.	37.	59.	37.	35.	39.	37.	36.	41.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	12444.	5060.	3.16	1022.50	1011	23	2.074E 01	1.2
2	1	564.17	177545.	7196.	2.30	1128.68	1120	19	2.959E 02	0.2
3	1	602.77	4848.	1656.	2.35	1205.81	1197	25	8.080E 00	1.9
4	1	645.77	345.	850.	2.80	1291.75	1283	19	5.747E-01	13.1

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:22:35 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q313B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8555.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2149:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4704.	11683.	0.0568	0.0008	1.3
%-ANTIMONY	564.2	1420.	161883.	0.8619	0.0025	0.3
%-ARSENIC	657.4	623.	0. <	0.0040	NOT DETECTABLE	

1115:	305.	361.	459.	506.	627.	576.	554.	606.	876.
1124:	1842.	5461.	13282.	23799.	30660.	32214.	27087.	17194.	7089.
1133:	1918.	379.	139.	113.	113.	104.	89.	84.	101.
1115:	305.	361.	459.	506.	627.	576.	554.	606.	876.
1124:	1842.	5461.	13282.	23799.	30660.	32214.	27087.	17194.	7089.
1133:	1918.	379.	139.	113.	113.	104.	89.	84.	101.
1301:	61.	44.	44.	46.	38.	41.	36.	33.	32.
1310:	44.	50.	57.	60.	57.	70.	52.	63.	45.
1319:	32.	29.	32.	30.	44.	44.	42.	45.	44.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	11683.	4704.	3.09	1022.53	1013	21	1.947E 01	1.2
2	9	559.76	1831.	1095.	1.30	1119.85	1111	38	3.052E 00	3.5
3	9	564.18	161883.	1420.	2.32	1128.68	1111	38	2.698E 02	0.3
4	1	602.80	4322.	1185.	2.32	1205.87	1198	20	7.203E 00	1.9
5	1	645.96	354.	588.	2.86	1292.13	1286	13	5.906E-01	11.0

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:23:38 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q313C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9281.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2200:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	6671.	12510.	0.0566	0.0008	1.4
%-ANTIMONY	564.2	7515.	171132.	0.8415	0.0025	0.3
%-ARSENIC	657.4	670.	0. <	0.0039	NOT DETECTABLE	

1115:	381.	440.	473.	567.	639.	656.	616.	686.	879.
1124:	2124.	6047.	14484.	25366.	32884.	34513.	29170.	17833.	7633.
1133:	1945.	425.	170.	148.	107.	99.	102.	106.	91.
1115:	381.	440.	473.	567.	639.	656.	616.	686.	879.
1124:	2124.	6047.	14484.	25366.	32884.	34513.	29170.	17833.	7633.
1133:	1945.	425.	170.	148.	107.	99.	102.	106.	91.
1301:	49.	62.	46.	44.	39.	42.	26.	40.	37.
1310:	48.	48.	55.	48.	70.	74.	53.	56.	45.
1319:	50.	44.	42.	48.	32.	38.	36.	46.	46.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	12510.	6671.	3.13	1022.48	1011.	28	2.085E 01	1.3
2	1	564.17	171132.	7515.	2.30	1128.67	1120	20	2.852E 02	0.3
3	1	602.81	4840.	1185.	2.32	1205.89	1194	20	8.067E 00	1.8
4	1	646.19	320.	637.	2.49	1292.58	1285	14	5.332E-01	12.5

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:24:44 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q314A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8934.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2210:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5088.	9461.	0.0449	0.0007	1.6
%-ANTIMONY	564.2	1195.	152779.	0.7819	0.0023	0.3
%-ARSENIC	657.2	499.	344.	0.0113	0.0012	10.7

1115:	307.	398.	559.	665.	690.	667.	617.	621.	844.
1124:	1827.	5245.	12706.	22487.	29302.	30324.	25549.	15883.	6629.
1133:	1859.	359.	128.	105.	103.	90.	112.	76.	96.
1115:	307.	398.	559.	665.	690.	667.	617.	621.	844.
1124:	1827.	5245.	12706.	22487.	29302.	30324.	25549.	15883.	6629.
1133:	1859.	359.	128.	105.	103.	90.	112.	76.	96.
1301:	40.	45.	29.	34.	39.	41.	31.	35.	35.
1310:	35.	39.	57.	81.	59.	72.	54.	69.	60.
1310:	45.	41.	26.	27.	40.	27.	29.	36.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	9461.	5088.	3.16	1022.49	1011.	25	1.577E 01	1.5
2	4	559.53	3425.	2025.	3.07	1119.40	1108	37	5.709E 00	2.5
3	4	564.17	152779.	1195.	2.31	1128.66	1108	37	2.546E 02	0.3
4	1	602.81	4203.	969.	2.32	1205.88	1198	17	7.005E 00	1.9
5	1	645.81	259.	525.	2.68	1291.82	1286	12	4.309E-01	14.0
6	1	657.15	344.	499.	4.01	1314.49	1308	15	5.736E-01	10.6

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:26:04 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q314B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9534.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2221:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	5863.	9739.	0.0437	0.0007	1.6
%-ANTIMONY	564.2	1354.	166167.	0.7984	0.0023	0.3
%-ARSENIC	657.4	657.	0. <	0.0038	NOT DETECTABLE	

1115:	333.	452.	591.	693.	749.	708.	694.	707.	920.
1124:	2027.	5824.	13915.	24449.	31676.	33034.	27766.	17231.	7246.
1133:	1981.	389.	122.	99.	116.	108.	77.	79.	95.
1115:	333.	452.	591.	693.	749.	708.	694.	707.	920.
1124:	2027.	5824.	13915.	24449.	31676.	33034.	27766.	17231.	7246.
1133:	1981.	389.	122.	99.	116.	108.	77.	79.	95.
1301:	41.	47.	48.	28.	27.	46.	38.	45.	37.
1310:	43.	50.	61.	64.	80.	66.	52.	56.	44.
1319:	41.	33.	30.	35.	39.	36.	38.	32.	43.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	9739.	5863.	3.06	1022.53	1012	25	1.623E 01	1.5
2	6	559.54	3679.	2185.	3.03	1119.41	1108	43	6.132E 00	2.4
3	6	564.17	166167.	1354.	2.31	1128.66	1108	43	2.769E 02	0.2
4	1	602.79	4672.	1242.	2.38	1205.85	1195	23	7.787E 00	1.8
5	1	645.97	361.	585.	2.50	1292.15	1287	14	6.016E-01	10.8

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:27:08 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q314C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10027.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2232:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 623. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	5284.	10748.	0.0463	0.0007	1.4
%-ANTIMONY	564.2	1313.	174238.	0.7975	0.0023	0.3
%-ARSENIC	657.4	744.	0. <	0.0038	NOT DETECTABLE	

1115:	327.	449.	625.	732.	813.	749.	768.	764.	952.
1124:	2027.	5990.	14239.	25711.	33063.	34516.	29056.	18351.	7731.
1133:	1994.	394.	152.	155.	112.	134.	101.	98.	93.
1115:	327.	449.	625.	732.	813.	749.	768.	764.	952.
1124:	2027.	5990.	14239.	25711.	33063.	34516.	29056.	18351.	7731.
1133:	1994.	394.	152.	155.	112.	134.	101.	98.	93.
1301:	40.	48.	41.	51.	51.	48.	41.	38.	43.
1310:	47.	44.	56.	80.	68.	74.	75.	61.	58.
1319:	54.	43.	41.	48.	52.	47.	40.	41.	47.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	10748.	5284.	3.10	1022.53	1011	23	1.791E 01	1.4
2	0	559.50	3918.	2231.	2.89	1119.49	1110	32	6.530E 00	2.3
3	0	564.17	174238.	1313.	2.32	1128.67	1110	32	2.904E 02	0.2
4	1	602.82	4664.	1320.	2.24	1205.91	1198	20	7.773E 00	1.8
5	1	645.77	326.	735.	2.77	1291.75	1285	15	5.439E-01	13.0



\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:28:15 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q315A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8670.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2242:38 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4970.	7055.	0.0355	0.0007	1.9
%-ANTIMONY	564.2	946.	136031.	0.7214	0.0022	0.3
%-ARSENIC	657.3	450.	347.	0.0119	0.0012	10.3

1115:	286.	425.	584.	668.	719.	675.	606.	576.	715.
1124:	1618.	4618.	11319.	19844.	25865.	26863.	22838.	14260.	5988.
1133:	1563.	297.	122.	85.	82.	90.	81.	65.	75.
1115:	286.	425.	584.	668.	719.	675.	606.	576.	715.
1124:	1618.	4618.	11319.	19844.	25865.	26863.	22838.	14260.	5988.
1133:	1563.	297.	122.	85.	82.	90.	81.	65.	75.
1301:	37.	37.	48.	31.	40.	34.	28.	25.	34.
1310:	47.	40.	43.	61.	76.	76.	77.	39.	38.
1319:	28.	26.	38.	37.	30.	39.	34.	33.	33.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	7055.	4970.	3.09	1022.50	1011	28	1.176E 01	1.8
2	3	559.39	3571.	1479.	2.83	1119.11	1107	37	5.952E 00	2.3
3	3	564.17	136031.	946.	2.32	1128.68	1107	37	2.267E 02	0.3
4	1	602.81	3733.	837.	2.32	1205.89	1196	18	6.221E 00	2.0
5	1	646.09	316.	468.	3.19	1292.39	1286	13	5.270E-01	11.2
6	1	657.35	347.	450.	3.63	1314.88	1308	15	5.789E-01	10.2

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:29:24 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q315B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10397.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2253:09 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL I-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7681.	8457.	0.0358	0.0007	1.9
%-ANTIMONY	564.2	1355.	163958.	0.7264	0.0021	0.3
%-ARSENIC	657.0	722.	275.	0.0079	0.0012	15.1

1115:	355.	450.	663.	745.	778.	808.	729.	705.	838.
1124:	1971.	5403.	13703.	24118.	31297.	32625.	27337.	17165.	7251.
1133:	1951.	414.	166.	130.	97.	128.	93.	116.	109.
1115:	355.	450.	663.	745.	778.	808.	729.	705.	838.
1124:	1971.	5403.	13703.	24118.	31297.	32625.	27337.	17165.	7251.
1133:	1951.	414.	166.	130.	97.	128.	93.	116.	109.
1301:	57.	44.	47.	45.	37.	44.	54.	43.	34.
1310:	40.	58.	69.	88.	94.	76.	78.	53.	46.
1319:	40.	42.	27.	51.	34.	36.	39.	38.	46.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	8457.	7681.	3.21	1022.46	1012	33	1.410E 01	1.8
2	4	559.45	3559.	1934.	2.58	1119.24	1112	27	5.932E 00	2.4
3	4	564.17	163958.	1355.	2.31	1128.67	1112	27	2.733E 02	0.2
4	1	602.83	4592.	1173.	2.32	1205.93	1197	19	7.654E 00	1.8
5	1	645.82	306.	616.	2.19	1291.85	1284	14	5.092E-01	12.8
6	1	656.95	275.	722.	2.38	1314.09	1305	19	4.585E-01	15.1

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:30:26 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q315C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8299.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2303:43 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3669.	6919.	0.0371	0.0007	1.8
%-ANTIMONY	564.2	1096.	133235.	0.7409	0.0023	0.3
%-ARSENIC	656.9	393.	228.	0.0082	0.0012	14.0

1115:	355.	450.	663.	745.	778.	808.	729.	705.	838.
1124:	1971.	5403.	13703.	24118.	31297.	32625.	27337.	17165.	7251.
1133:	1951.	414.	166.	130.	97.	128.	93.	116.	109.
1115:	355.	450.	663.	745.	778.	808.	729.	705.	838.
1124:	1971.	5403.	13703.	24118.	31297.	32625.	27337.	17165.	7251.
1133:	1951.	414.	166.	130.	97.	128.	93.	116.	109.
1301:	57.	44.	47.	45.	37.	44.	54.	43.	34.
1310:	40.	58.	69.	88.	94.	76.	78.	53.	46.
1319:	40.	42.	27.	51.	34.	36.	39.	38.	46.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	6919.	3669.	3.13	1022.46	1011	22	1.153E 01	1.7
2	2	559.50	3073.	1735.	2.68	1119.34	1111	34	5.121E 00	2.6
3	2	564.18	133235.	1096.	2.31	1128.69	1111	34	2.221E 02	0.3
4	1	602.84	3685.	996.	2.31	1205.95	1196	22	6.142E 00	2.0
5	1	645.94	376.	500.	2.91	1292.08	1284	16	6.270E-01	9.9
6	1	656.91	228.	393.	2.82	1314.01	1309	12	3.802E-01	14.0

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:31:33 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q316  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 2118.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2314:14 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1260.	3953.	0.0837	0.0018	2.1
%-ANTIMONY	564.2	186.	34071.	0.7438	0.0042	0.6
%-ARSENIC	657.4	165.	146.	0.0207	0.0031	15.0

1115:	96.	149.	209.	273.	284.	274.	184.	188.	183.
1124:	369.	1068.	2735.	4939.	6341.	6786.	5720.	3700.	1566.
1133:	397.	71.	32.	20.	13.	10.	14.	19.	13.
1115:	96.	149.	209.	273.	284.	274.	184.	188.	183.
1124:	369.	1068.	2735.	4939.	6341.	6786.	5720.	3700.	1566.
1133:	397.	71.	32.	20.	13.	10.	14.	19.	13.
1301:	12.	19.	4.	15.	20.	15.	13.	17.	16.
1310:	20.	20.	18.	27.	34.	35.	33.	28.	12.
1319:	14.	13.	8.	8.	13.	9.	7.	14.	10.

PULSF-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	3953.	1260.	2.94	1022.49	1012	24	6.589E 00	2.0
2	3	559.33	1478.	338.	2.70	1119.00	1109	29	2.463E 00	3.1
3	3	564.19	34071.	186.	2.32	1128.72	1109	29	5.679E 01	0.5
4	1	602.91	972.	290.	2.26	1206.09	1195	19	1.619E 00	4.1
5	1	657.44	146.	165.	2.80	1315.06	1307	15	2.428E-01	15.0

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:32:36 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q317  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 1837.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2324:32 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 605. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003903 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	1124.	2200.	0.0542	0.0017	3.1
%-ANTIMONY	564.2	198.	28174.	0.7104	0.0044	0.6
%-ARSENIC	657.4	226.	0. <	0.0120	NOT DETECTABLE	

1115:	85.	110.	162.	184.	217.	169.	163.	121.	163.
1124:	352.	932.	2229.	4126.	5412.	5647.	4736.	3011.	1238.
1132:	372.	66.	17.	13.	14.	16.	17.	7.	9.
1115:	85.	110.	162.	184.	217.	169.	163.	121.	163.
1124:	352.	932.	2229.	4126.	5412.	5647.	4736.	3011.	1238.
1132:	372.	66.	17.	13.	14.	16.	17.	7.	9.
1301:	19.	14.	14.	15.	12.	16.	14.	11.	10.
1310:	6.	22.	19.	16.	21.	28.	29.	20.	16.
1319:	10.	14.	15.	9.	10.	11.	14.	8.	11.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.02	2200.	1124.	3.21	1022.45	1011	29	3.667E 00	3.0
2	4	559.36	1054.	386.	2.99	1119.06	1109	29	1.757E 00	4.1
3	4	564.18	28174.	198.	2.29	1128.69	1109	29	4.696E 01	0.6
4	1	602.88	806.	543.	2.26	1206.03	1185	35	1.343E 00	5.4
5	1	645.96	76.	182.	2.23	1292.12	1284	14	1.270E-01	27.5

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:33:38 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q318  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 354.0000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2334:51 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.2	285.	798.	0.1030	0.0048	4.7
%-ANTIMONY	564.2	122.	5648.	0.7404	0.0101	1.4
%-ARSENIC	657.4	114.	0. <	0.0449	NOT DETECTABLE	

1115:	10.	31.	42.	52.	63.	63.	42.	33.	36.
1124:	69.	167.	459.	814.	1097.	1178.	1021.	585.	259.
1133:	68.	20.	11.	6.	7.	6.	15.	7.	10.
1115:	10.	31.	42.	52.	63.	63.	42.	33.	36.
1124:	69.	167.	459.	814.	1097.	1178.	1021.	585.	259.
1133:	68.	20.	11.	6.	7.	6.	15.	7.	10.
1301:	8.	8.	6.	10.	5.	7.	4.	5.	10.
1310:	10.	3.	9.	9.	14.	8.	11.	7.	9.
1319:	9.	10.	5.	6.	10.	4.	4.	11.	8.

PULSE-FILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.16	798.	285.	3.00	1022.73	1013	19	1.330E 00	4.6
2	2	559.43	232.	144.	2.34	1119.20	1113	33	3.871E-01	9.8
3	2	564.20	5648.	122.	2.23	1128.73	1113	33	9.414E 00	1.4
4	1	602.92	145.	127.	2.20	1206.11	1200	13	2.411E-01	13.8

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:34:41 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00

SAMPLE IDENTIFICATION: Q319

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 564.0000

UNITS: UG

SAMPLE GEOMETRY: .25 IN

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2345:04 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	451.	1035.	0.0047	0.0036	4.3
%-ANTIMONY	564.2	143.	9139.	0.7533	0.0081	1.1
%-ARSENIC	657.4	154.	0. <	0.0327	NOT DETECTABLE	

1115:	31.	27.	50.	69.	79.	82.	58.	51.	71.
1124:	104.	311.	729.	1310.	1755.	1826.	1566.	1005.	426.
1132:	121.	25.	13.	11.	8.	15.	11.	16.	13.
1115:	31.	27.	50.	69.	79.	82.	58.	51.	71.
1124:	104.	311.	729.	1310.	1755.	1826.	1566.	1005.	426.
1132:	121.	25.	13.	11.	8.	15.	11.	16.	13.
1301:	13.	11.	10.	12.	11.	13.	13.	11.	8.
1310:	13.	11.	14.	10.	17.	12.	13.	12.	16.
1319:	6.	11.	11.	15.	12.	9.	8.	11.	7.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.11	1035.	451.	2.84	1022.63	1013	19	1.725E 00	4.3
2	5	559.66	298.	144.	1.80	1119.66	1109	32	4.968E-01	8.1
3	5	564.20	9139.	143.	2.31	1128.73	1109	32	1.523E 01	1.1
4	1	602.89	293.	253.	2.36	1206.05	1196	23	4.886E-01	9.6

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:35:44 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q320A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10169.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 20DEC79 2355:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26DEC79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	5285.	11816.	0.0541	0.0007	1.4
%-ANTIMONY	564.2	5263.	144716.	0.6628	0.0021	0.3
%-ARSENIC	657.4	502.	0. <	0.0032	NOT DETECTABLE	

1115:	247.	273.	347.	449.	460.	473.	479.	577.	819.
1124:	1584.	4722.	12028.	21544.	27629.	28781.	24585.	15429.	6313.
1132:	1639.	338.	130.	94.	90.	93.	82.	70.	86.
1115:	247.	273.	347.	449.	460.	473.	479.	577.	819.
1124:	1584.	4722.	12028.	21544.	27629.	28781.	24585.	15429.	6313.
1132:	1639.	338.	130.	94.	90.	93.	82.	70.	86.
1301:	46.	41.	44.	32.	37.	43.	40.	39.	32.
1310:	26.	42.	47.	46.	44.	47.	31.	56.	31.
1319:	34.	29.	37.	32.	42.	36.	34.	40.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	11816.	5285.	3.18	1022.46	1011	26	1.969E 01	1.3
2	1	564.18	144716.	5263.	2.31	1128.68	1120	19	2.412E 02	0.3
3	1	602.87	4243.	914.	2.44	1206.00	1196	18	7.072E 00	1.8
4	1	645.93	240.	454.	2.43	1292.07	1287	11	3.999E-01	14.1



\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:36:49 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q320R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10541.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TADJ

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 5:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	5886.	12369.	0.0552	0.0007	1.3
%-ANTIMONY	564.2	5520.	153964.	0.6815	0.0021	0.3
%-ARSENIC	657.4	580.	0. <	0.0034	NOT DETECTABLE	

1115:	293.	307.	388.	463.	502.	498.	499.	637.	871.
1124:	1767.	5188.	12876.	22238.	29464.	30962.	26083.	16590.	7019.
1133:	1859.	366.	140.	102.	89.	75.	87.	105.	92.
1115:	293.	307.	388.	463.	502.	498.	499.	637.	871.
1124:	1767.	5188.	12876.	22238.	29464.	30962.	26083.	16590.	7019.
1133:	1859.	366.	140.	102.	89.	75.	87.	105.	92.
1301:	53.	44.	31.	48.	41.	36.	43.	35.	44.
1310:	35.	37.	45.	51.	58.	55.	43.	46.	33.
1319:	46.	40.	47.	46.	32.	41.	35.	34.	42.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	12369.	5886.	3.19	1022.51	1011	27	2.062E 01	1.3
2	1	564.19	153964.	5520.	2.31	1128.70	1120	19	2.566E 02	0.3
3	1	602.81	4520.	1044.	2.35	1205.88	1196	18	7.534E 00	1.8
4	1	646.24	328.	645.	2.55	1292.69	1285	15	5.459E-01	12.3

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:38:03 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q320C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9273.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 16:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	3588.	10291.	0.0527	0.0007	1.4
%-ANTIMONY	564.2	4047.	122118.	0.6156	0.0020	0.3
%-ARSENIC	657.4	459.	0. <	0.0034	NOT DETECTABLE	

1115:	217.	265.	313.	361.	348.	396.	396.	501.	636.
1124:	1374.	4192.	10033.	17735.	23080.	24449.	20824.	13066.	5606.
1133:	1436.	290.	94.	57.	81.	62.	50.	54.	65.
1115:	217.	265.	313.	361.	348.	396.	396.	501.	636.
1124:	1374.	4192.	10033.	17735.	23080.	24449.	20824.	13066.	5606.
1133:	1436.	290.	94.	57.	81.	62.	50.	54.	65.
1304:	21.	37.	37.	38.	33.	46.	30.	33.	38.
1310:	37.	33.	33.	41.	34.	43.	31.	36.	37.
1319:	35.	27.	34.	34.	31.	31.	23.	20.	39.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	10291.	3588.	3.22	1022.55	1011	23	1.715E 01	1.3
2	1	564.19	122118.	4047.	2.31	1128.71	1119	19	2.035E 02	0.3
3	1	602.86	3564.	780.	2.34	1205.98	1195	20	5.941E 00	2.0
4	1	645.70	336.	570.	3.47	1291.61	1286	19	5.593E-01	11.4

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:39:12 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: 0321A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9532.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 26:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4648.	11337.	0.0570	0.0008	1.4
%-ANTIMONY	564.2	1102.	125811.	0.6182	0.0020	0.3
%-ARSENIC	657.2	452.	214.	0.0070	0.0011	15.7

1115:	276.	336.	449.	493.	579.	549.	523.	519.	683.
1124:	1436.	4093.	10365.	18421.	24021.	25113.	21248.	13281.	5529.
1133:	1430.	285.	103.	79.	75.	71.	68.	66.	63.
1115:	276.	336.	449.	493.	579.	549.	523.	519.	683.
1124:	1436.	4093.	10365.	18421.	24021.	25113.	21248.	13281.	5529.
1133:	1430.	285.	103.	79.	75.	71.	68.	66.	63.
1304:	43.	31.	42.	37.	32.	26.	29.	29.	31.
1310:	36.	30.	41.	61.	57.	75.	55.	47.	42.
1319:	35.	33.	34.	28.	30.	32.	23.	29.	28.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	11337.	4648.	3.18	1022.56	1012	28	1.889E 01	1.3
2	5	559.58	2634.	1822.	2.99	1119.50	1111	41	4.389E 00	3.0
3	5	564.18	125811.	1102.	2.30	1128.68	1111	41	2.097E 02	0.3
4	1	602.81	3620.	756.	2.32	1205.90	1195	21	6.033E 00	2.0
5	1	646.06	245.	740.	2.17	1292.32	1282	20	4.086E-01	16.9
6	1	657.22	214.	452.	2.51	1314.64	1307	16	3.571E-01	15.6

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 \*\*\*\*\* 21 DEC 1979 3:40:20 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q321B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8523.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 37:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	4147.	9669.	0.0549	0.0008	1.5
%-ANTIMONY	564.2	807.	114075.	0.6280	0.0021	0.3
%-ARSENIC	657.3	403.	138.	0.0050	0.0011	22.4

1115:	259.	333.	374.	476.	491.	455.	514.	486.	632.
1124:	1288.	3753.	9352.	16519.	21824.	22750.	19218.	12040.	5097.
1132:	1320.	236.	92.	65.	68.	65.	71.	65.	55.
1115:	259.	333.	374.	476.	491.	455.	514.	486.	632.
1124:	1288.	3753.	9352.	16519.	21824.	22750.	19218.	12040.	5097.
1132:	1320.	236.	92.	65.	68.	65.	71.	65.	55.
1301:	28.	28.	29.	22.	39.	26.	24.	31.	28.
1310:	32.	27.	30.	44.	50.	53.	33.	40.	31.
1319:	29.	25.	28.	32.	23.	30.	31.	16.	26.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	9669.	4147.	3.09	1022.55	1013	26	1.612E 01	1.4
2	5	559.62	2456.	1452.	3.02	1119.58	1109	30	4.094E 00	3.0
3	5	564.18	114075.	807.	2.30	1128.69	1109	30	1.901E 02	0.3
4	1	602.86	3345.	822.	2.29	1205.99	1195	23	5.576E 00	2.1
5	1	646.00	228.	400.	2.86	1292.20	1286	13	3.794E-01	14.1
6	1	657.32	138.	403.	2.89	1314.83	1308	14	2.292E-01	22.3

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:41:25 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q321C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10394.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 47:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4043.	12134.	0.0570	0.0007	1.3
%-ANTIMONY	564.2	911.	135979.	0.6150	0.0019	0.3
%-ARSENIC	657.1	751.	170.	0.0051	0.0012	24.0

1115:	268.	375.	470.	552.	644.	619.	580.	559.	725.
1124:	1568.	4575.	11125.	19848.	25708.	27274.	22814.	14337.	6038.
1133:	1606.	327.	102.	99.	104.	93.	83.	70.	68.
1115:	268.	375.	470.	552.	644.	619.	580.	559.	725.
1124:	1568.	4575.	11125.	19848.	25708.	27274.	22814.	14337.	6038.
1133:	1606.	327.	102.	99.	104.	93.	83.	70.	68.
1301:	31.	36.	36.	29.	33.	34.	37.	42.	24.
1310:	34.	39.	58.	64.	73.	73.	55.	53.	34.
1319:	41.	34.	32.	33.	21.	28.	32.	35.	43.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.04	12134.	4043.	3.07	1022.49	1012	21	2.022E-01	1.2
2	4	559.56	3267.	1529.	3.03	1119.45	1107	36	5.445E-00	2.4
3	4	564.18	135979.	911.	2.31	1128.69	1107	36	2.266E-02	0.3
4	1	602.80	3870.	1202.	2.38	1205.87	1197	21	6.450E-00	2.0
5	1	645.69	191.	522.	2.02	1291.58	1286	12	3.177E-01	18.4
6	1	657.07	170.	751.	2.19	1314.33	1308	21	2.841E-01	24.0

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:42:34 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: 0322A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10854.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 58:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	5258.	11865.	0.0539	0.0007	1.4
%-ANTIMONY	564.2	989.	142592.	0.6187	0.0019	0.3
%-ARSENIC	657.6	387.	284.	0.0082	0.0010	11.6

1115:	290.	392.	471.	598.	639.	623.	541.	595.	717.
1124:	1664.	4733.	11557.	21119.	26862.	28538.	23819.	14999.	6432.
1133:	1687.	346.	124.	97.	86.	88.	83.	79.	91.
1115:	290.	392.	471.	598.	639.	623.	541.	595.	717.
1124:	1664.	4733.	11557.	21119.	26862.	28538.	23819.	14999.	6432.
1133:	1687.	346.	124.	97.	86.	88.	83.	79.	91.
1301:	32.	41.	24.	33.	38.	58.	33.	31.	31.
1310:	27.	45.	50.	51.	55.	82.	68.	68.	52.
1319:	45.	25.	30.	27.	35.	27.	21.	37.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	11865.	5258.	3.10	1022.55	1012	27	1.978E 01	1.3
2	3	559.47	3062.	1566.	2.83	1119.28	1107	31	5.103E 00	2.6
3	3	564.18	142592.	989.	2.31	1128.68	1107	31	2.377E 02	0.3
4	1	602.80	4012.	828.	2.35	1205.87	1198	16	6.687E 00	1.9
5	1	645.01	284.	564.	2.69	1291.43	1286	14	4.729E-01	13.2
6	1	657.59	284.	387.	3.01	1315.37	1309	13	4.728E-01	11.5

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:43:43 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q322B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9793.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 108:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEI I-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	ZERROR
%-COPPER	511.1	4656.	11006.	0.0559	0.0008	1.4
%-ANTIMONY	564.2	1067.	134416.	0.6476	0.0020	0.3
%-ARSENIC	656.9	403.	195.	0.0063	0.0010	16.3

1115:	242.	356.	476.	594.	589.	548.	577.	571.	753.
1124:	1531.	4523.	11032.	19442.	25560.	26961.	22612.	14248.	6017.
1133:	1613.	319.	120.	122.	104.	80.	80.	74.	58.
1115:	242.	356.	476.	594.	589.	548.	577.	571.	753.
1124:	1531.	4523.	11032.	19442.	25560.	26961.	22612.	14248.	6017.
1133:	1613.	319.	120.	122.	104.	80.	80.	74.	58.
1301:	33.	36.	45.	29.	29.	30.	30.	40.	28.
1310:	32.	40.	46.	74.	66.	49.	48.	43.	41.
1319:	25.	34.	26.	30.	31.	28.	35.	38.	38.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	ZERR
1	1	511.11	11006.	4656.	3.18	1022.63	1012	25	1.834E 01	1.3
2	5	559.60	2854.	1819.	2.99	1119.53	1109	35	4.757E 00	2.8
3	5	564.18	134416.	1067.	2.31	1128.69	1109	35	2.240E 02	0.3
4	1	602.83	3887.	1248.	2.29	1205.93	1197	23	6.479E 00	2.1
5	1	646.13	258.	562.	2.53	1292.46	1286	15	4.293E-01	14.4
6	1	656.87	195.	403.	2.52	1313.93	1309	13	3.242E-01	16.3

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:44:47 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q322C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9368.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 119:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.1	4246.	10145.	0.0544	0.0008	1.4
%-ANTIMONY	564.2	852.	120664.	0.6089	0.0020	0.3
%-ARSENIC	657.4	484.	0. <	0.0036	NOT DETECTABLE	

1115:	235.	327.	429.	502.	500.	529.	504.	491.	655.
1124:	1358.	4135.	9789.	17507.	22800.	23859.	20422.	12854.	5365.
1133:	1378.	274.	93.	77.	86.	69.	79.	61.	57.
1115:	235.	327.	429.	502.	500.	529.	504.	491.	655.
1124:	1358.	4135.	9789.	17507.	22800.	23859.	20422.	12854.	5365.
1133:	1378.	274.	93.	77.	86.	69.	79.	61.	57.
1301:	31.	25.	33.	27.	27.	32.	40.	26.	25.
1310:	33.	28.	44.	54.	51.	51.	46.	29.	43.
1319:	25.	24.	31.	31.	22.	20.	32.	36.	27.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.05	10145.	4246.	3.16	1022.51	1011	27	1.691E 01	1.3
2	4	559.54	2791.	1556.	3.17	1119.41	1108	30	4.652E 00	2.8
3	4	564.19	120664.	852.	2.32	1128.70	1108	30	2.011E 02	0.3
4	1	602.84	3572.	707.	2.35	1205.94	1197	18	5.953E 00	2.0
5	1	646.23	199.	817.	2.48	1292.67	1281	23	3.323E-01	21.5



\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:45:53 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q261A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9290.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 129:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	10470.	5468.	0.0299	0.0009	3.0
Z-ANTIMONY	564.1	3826.	406429.	2.0721	0.0045	0.2
Z-ARSENIC	657.4	1863.	0. <	0.0070	NOT DETECTABLE	

1115:	762.	967.	1080.	1382.	1388.	1470.	1490.	1625.	2328.
1124:	5086.	14730.	35227.	60900.	77771.	80105.	66275.	41383.	17635.
1133:	5012.	1219.	657.	511.	497.	447.	420.	422.	413.
1115:	762.	967.	1080.	1382.	1388.	1470.	1490.	1625.	2328.
1124:	5086.	14730.	35227.	60900.	77771.	80105.	66275.	41383.	17635.
1133:	5012.	1219.	657.	511.	497.	447.	420.	422.	413.
1301:	152.	129.	123.	134.	116.	118.	126.	134.	107.
1310:	128.	150.	142.	168.	168.	165.	178.	141.	136.
1319:	124.	121.	135.	134.	119.	120.	119.	123.	124.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	511.00	5468.	10470.	3.14	1022.41	1011	20	9.114E 00	3.0
2	10	559.70	5787.	2065.	1.23	1119.74	1108	32	9.645E 00	1.7
3	10	564.14	406429.	3826.	2.33	1128.62	1108	32	6.774E 02	0.2
4	1	602.78	11666.	3357.	2.39	1205.83	1197	18	1.944E 01	1.2
5	1	645.98	800.	1936.	2.61	1292.16	1285	14	1.334E 00	8.5

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:46:57 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q261B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9084.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 141:05 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 651. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.1	10008.	4916.	0.0277	0.0009	3.2
Z-ANTIMONY	564.2	3752.	402821.	2.1044	0.0046	0.2
Z-ARSENIC	657.4	1824.	0. <	0.0071	NOT DETECTABLE	

1115:	799.	949.	1167.	1354.	1381.	1431.	1464.	1464.	2245.
1124:	5018.	14267.	34563.	59698.	76548.	79697.	66684.	41450.	17597.
1133:	4742.	1225.	645.	515.	460.	401.	396.	377.	361.
1115:	799.	949.	1167.	1354.	1381.	1431.	1464.	1464.	2245.
1124:	5018.	14267.	34563.	59698.	76548.	79697.	66684.	41450.	17597.
1133:	4742.	1225.	645.	515.	460.	401.	396.	377.	361.
1304:	142.	150.	150.	113.	143.	122.	124.	121.	115.
1310:	138.	147.	140.	138.	165.	175.	152.	156.	140.
1319:	124.	123.	111.	109.	113.	131.	130.	112.	108.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	4916.	10008.	2.99	1022.52	1013	19	8.194E 00	3.2
2	6	559.69	4553.	2671.	1.49	1119.72	1109	32	7.589E 00	2.2
3	6	564.16	402821.	3752.	2.33	1128.64	1109	32	6.714E 02	0.2
4	1	602.82	11541.	3660.	2.38	1205.90	1195	20	1.924E 01	1.2
5	1	645.86	722.	1960.	2.35	1291.92	1285	13	1.203E 00	9.4

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:48:03 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: 0261C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9200.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 152:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 647. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	8339.	4645.	0.0261	0.0008	3.2
%-ANTIMONY	564.2	3190.	368511.	1.9046	0.0043	0.2
%-ARSENIC	657.5	1359.	289.	0.0101	0.0019	19.1

1115:	696.	859.	1019.	1176.	1320.	1261.	1403.	1448.	2111.
1124:	4613.	13336.	31191.	54389.	70575.	74062.	60969.	37581.	16143.
1133:	4432.	1096.	526.	434.	433.	365.	341.	314.	298.
1115:	696.	859.	1019.	1176.	1320.	1261.	1403.	1448.	2111.
1124:	4613.	13336.	31191.	54389.	70575.	74062.	60969.	37581.	16143.
1133:	4432.	1096.	526.	434.	433.	365.	341.	314.	298.
1301:	131.	134.	112.	126.	95.	102.	112.	105.	120.
1310:	107.	96.	121.	141.	163.	166.	141.	128.	107.
1310:	118.	115.	101.	93.	98.	95.	124.	98.	126.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.98	4645.	8339.	3.01	1022.38	1014	17	7.742E 00	3.1
2	6	559.73	4093.	2700.	1.52	1119.79	1108	39	6.822E 00	2.4
3	6	564.16	368511.	3190.	2.31	1128.64	1108	39	6.142E 02	0.2
4	1	602.81	10585.	2869.	2.34	1205.88	1198	17	1.764E 01	1.2
5	1	646.00	712.	1849.	2.35	1292.20	1285	15	1.186E 00	9.3
6	1	657.48	289.	1359.	2.41	1315.15	1310	13	4.811E-01	19.0

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:49:08 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q347AA  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9517.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 203:13 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	618.	9533.	0.0523	0.0006	1.2
%-ANTIMONY	564.2	200.	3773.	0.0189	0.0003	1.7
%-ARSENIC	657.4	90.	0. <	0.0016	NOT DETECTABLE	

1115:	9.	7.	16.	9.	12.	19.	28.	17.	16.
1124:	48.	119.	337.	576.	706.	746.	618.	396.	177.
1133:	49.	16.	8.	6.	6.	9.	11.	7.	8.
1115:	9.	7.	16.	9.	12.	19.	28.	17.	16.
1124:	48.	119.	337.	576.	706.	746.	618.	396.	177.
1133:	49.	16.	8.	6.	6.	9.	11.	7.	8.
1301:	4.	4.	5.	7.	6.	2.	3.	9.	0.
1310:	9.	8.	12.	6.	11.	7.	9.	6.	6.
1319:	4.	3.	9.	11.	4.	3.	12.	3.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.06	9533.	618.	3.15	1022.53	1011	26	1.589E 01	1.1
2	1	564.15	3773.	200.	2.35	1128.63	1118	20	6.288E 00	1.7
3	1	603.03	119.	132.	2.39	1206.33	1199	16	1.983E-01	16.4

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:50:07 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q347AB  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10602.00 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 213:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	648.	9964.	0.0496	0.0006	1.2
%-ANTIMONY	564.2	275.	4324.	0.0195	0.0003	1.6
%-ARSENIC	657.4	97.	0. <	0.0015	NOT DETECTABLE	

1115:	16.	17.	19.	18.	13.	16.	16.	21.	17.
1124:	57.	140.	392.	609.	816.	811.	766.	459.	213.
1132:	80.	16.	16.	6.	7.	11.	4.	8.	13.
1115:	16.	17.	19.	18.	13.	16.	16.	21.	17.
1124:	57.	140.	392.	609.	816.	811.	766.	459.	213.
1132:	80.	16.	16.	6.	7.	11.	4.	8.	13.
1301:	10.	11.	7.	11.	7.	8.	4.	6.	10.
1310:	5.	8.	7.	8.	3.	8.	7.	8.	15.
1319:	7.	4.	7.	14.	5.	8.	5.	4.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	9964.	648.	3.05	1022.55	1012	24	1.661E 01	1.1
2	1	564.19	4324.	275.	2.39	1128.72	1118	20	7.206E 00	1.6
3	1	602.80	154.	135.	2.31	1205.87	1195	18	2.573E-01	13.3

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:51:05 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q347AC  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9162.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 223:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	564.	8864.	0.0515	0.0006	1.2
%-ANTIMONY	564.2	290.	3624.	0.0189	0.0003	1.8
%-ARSENIC	657.4	96.	0. <	0.0017	NOT DETECTABLE	

1115:	13.	18.	19.	15.	22.	19.	14.	19.	17.
1124:	46.	135.	285.	546.	679.	676.	660.	400.	180.
1133:	49.	12.	17.	10.	11.	9.	10.	7.	4.
1115:	13.	18.	19.	15.	22.	19.	14.	19.	17.
1124:	46.	135.	285.	546.	679.	676.	660.	400.	180.
1133:	49.	12.	17.	10.	11.	9.	10.	7.	4.
1301:	8.	8.	10.	8.	4.	10.	8.	3.	6.
1310:	8.	8.	3.	10.	11.	3.	5.	8.	8.
1319:	7.	11.	8.	6.	10.	8.	9.	12.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.09	8864.	564.	3.10	1022.60	1011	23	1.477E 01	1.1
2	1	564.21	3624.	290.	2.37	1128.75	1120	20	6.040E 00	1.8
3	1	602.85	142.	120.	2.62	1205.96	1198	16	2.363E-01	13.8

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:52:09 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q347BA  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8951.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 233:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	469.	8494.	0.0510	0.0006	1.2
%-ANTIMONY	564.2	599.	3520.	0.0188	0.0004	2.0
%-ARSENIC	657.4	92.	0. <	0.0017	NOT DETECTABLE	

1115:	9.	17.	10.	19.	15.	18.	16.	18.	18.
1124:	46.	116.	290.	541.	697.	703.	635.	357.	170.
1133:	47.	9.	9.	8.	8.	9.	10.	11.	10.
1115:	9.	17.	10.	19.	15.	18.	16.	18.	18.
1124:	46.	116.	290.	541.	697.	703.	635.	357.	170.
1133:	47.	9.	9.	8.	8.	9.	10.	11.	10.
1301:	7.	10.	9.	10.	5.	8.	5.	7.	4.
1310:	5.	4.	11.	7.	4.	5.	8.	8.	9.
1319:	9.	7.	11.	6.	5.	6.	10.	5.	6.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.07	8494.	469.	3.08	1022.55	1011	28	1.416E 01	1.1
2	1	564.18	3520.	599.	2.26	1128.68	1121	47	5.866E 00	2.0
3	1	603.25	153.	162.	3.02	1206.76	1200	24	2.550E-01	14.3

\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:53:05 PM \*\*\*\*\*  
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91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q347BB  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8889.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 244:10 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 603. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.1	558.	8050.	0.0491	0.0006	1.3
%-ANTIMONY	564.2	210.	3742.	0.0202	0.0003	1.7
%-ARSENIC	657.4	108.	0. <	0.0019	NOT DETECTABLE	

1115:	16.	13.	15.	13.	18.	12.	21.	19.	31.
1124:	58.	126.	334.	551.	738.	727.	643.	368.	178.
1133:	48.	18.	7.	7.	9.	5.	8.	11.	8.
1115:	16.	13.	15.	13.	18.	12.	21.	19.	31.
1124:	58.	126.	334.	551.	738.	727.	643.	368.	178.
1133:	48.	18.	7.	7.	9.	5.	8.	11.	8.
1301:	14.	11.	4.	6.	10.	5.	8.	7.	5.
1310:	7.	11.	11.	5.	7.	9.	9.	10.	7.
1319:	11.	10.	6.	6.	5.	8.	11.	20.	8.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.10	8050.	558.	3.08	1022.61	1011	24	1.342E 01	1.2
2	1	564.16	3742.	210.	2.32	1128.64	1118	20	6.237E 00	1.7
3	1	602.76	129.	117.	2.64	1205.79	1199	13	2.151E-01	14.8



\*\*\*\*\*  
 \*\*\*\*\* 21 DEC 1979 3:54:10 PM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION

SAMPLE DATE: 20DEC79 1021:00  
 SAMPLE IDENTIFICATION: Q347BC  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8577.000 UNITS: UG  
 SAMPLE GEOMETRY: .25 IN  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 21DEC79 254:24 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 602. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	668.	7640.	0.0487	0.0006	1.3
%-ANTIMONY	564.1	259.	3121.	0.0175	0.0003	1.9
%-ARSENIC	657.4	87.	0. <	0.0018	NOT DETECTABLE	

1115:	19.	8.	14.	12.	15.	20.	21.	23.	14.
1124:	41.	115.	268.	468.	635.	612.	506.	333.	159.
1133:	49.	12.	8.	7.	4.	8.	9.	12.	13.
1115:	19.	8.	14.	12.	15.	20.	21.	23.	14.
1124:	41.	115.	268.	468.	635.	612.	506.	333.	159.
1133:	49.	12.	8.	7.	4.	8.	9.	12.	13.
1301:	8.	6.	9.	6.	14.	4.	8.	3.	6.
1310:	4.	9.	9.	11.	3.	7.	3.	6.	10.
1319:	7.	9.	3.	8.	7.	7.	5.	6.	4.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.03	7640.	668.	3.25	1022.47	1011	30	1.273E 01	1.2
2	1	564.15	3121.	259.	2.32	1128.63	1118	22	5.202E 00	1.9
3	1	602.73	158.	217.	3.15	1205.74	1197	31	2.634E-01	15.4

Return

91.119065 QY RF

FIFTH IRRADIATION

5<sup>th</sup> irradiation

Part II

12/20/79

(5)

SAMPLE-

SAM. WT.

% COPPER

% ANTIMONY

% ARSENIC

Q222A	10256.000	0.01153 .012	0.80828 .734	0.18802 .184
Q222B	12375.000	0.01004 .011	0.81384	0.19609
Q222C	10287.000	0.01265	0.80860	0.19732
Q222D	8484.000	0.01272	1.00848	0.26243
Q222E	7246.000	0.01655	1.23398	0.30204
Q222F	8903.000	0.01259	0.84437	0.19014
Q222G	10368.000	0.01138	0.78211	0.19068
Q222H	8009.000	0.00554	5.42477	1.26722
Q222I	8515.000	0.01222	1.07299	0.26000
Q222J	5933.000	0.01585	1.13178	0.27536
Q222K	7218.000	0.01895	2.38258	0.58194
Q222L	8711.000	0.01188	0.80862	0.19639
Q222M	9700.000	0.01276	0.83578	0.19573
Q222N	9779.000	0.01134	0.84183	0.19306
Q222O	9124.000	0.01558	1.95002	0.48051
Q222P	8006.000	0.01340	0.83680	0.19374
Q222Q	8321.000	0.01430	1.03555	0.24062
Q222R	8045.000	0.01455	1.22264	0.29376
Q222S	8163.000	0.01226	0.79332	0.19112
Q222T	8652.000	0.01663	0.72589	0.17270
		0.01354 AVG	1.27211 AVG	0.30344 AVG
		0.002962 SD	1.062786 SD	0.249719 SD
		21.880741 %RSD	83.544899 %RSD	82.295235 %RSD

Q223A	9945.000	0.00991	1.08896	0.26040
Q223B	6360.000	0.01235	0.81869	0.19865
Q223C	6922.000	0.01038	0.80765	0.18720
Q223D	7372.000	0.00985	0.75978	0.17561
Q223E	6348.000	0.00710	5.60154	1.35076
Q223F	7145.000	0.01028	0.79060	0.18404
Q223G	5566.000	0.01132	0.79291	0.19375
Q223H	7719.000	0.01491	0.72912	0.16375
Q223I	6110.000	0.01301	0.82492	0.19213
Q223J	7710.000	0.01304	0.78235	0.18645
Q223K	5883.000	0.00798	5.92930	1.44188
Q223L	6120.000	0.01493	0.76994	0.18769
Q223M	5611.000	0.01437	0.79116	0.19174
Q223N	6722.000	0.01866	2.14784	0.52931
Q223O	6078.000	0.01332	0.75446	0.18250
Q223P	8155.000	0.01330	0.94976	0.23633
Q223Q	5228.000	0.01256	0.81533	0.19362
Q223R	6434.000	0.01313	0.83345	0.19726
Q223S	5488.000	0.01351	0.86479	0.21768
Q223T	6464.000	0.01436	0.85107	0.19400
		0.01296 AVG	1.38518 AVG	0.33329 AVG
		0.002867 SD	1.529667 SD	0.371916 SD
		22.128092 %RSD	110.430763 %RSD	111.590317 %RSD

Q224A	4863.000	0.00890	5.30724	1.35133
Q224B	8218.000	0.01254	0.94577	0.24043
Q224C	8397.000	0.01656	1.98304	0.49172
Q224D	7322.000	0.01532	0.80568	0.17797
Q224E	7770.000	0.01276	0.75722	0.18878
Q224F	8343.000	0.01078	0.97507	0.22804
Q224G	7065.000	0.01190	0.82359	0.19006
Q224H	8409.000	0.01356	0.92981	0.23004
Q224I	6837.000	0.01297	0.78326	0.19105
Q224J	8286.000	0.01240	0.77898	0.18398

Q224K	8086.000		0.01130	1.24648	0.28910
Q224L	7003.000		0.01288	0.80008	0.19108
Q224M	6525.000		0.01274	0.96107	0.22338
Q224N	7827.000		0.01053	0.93832	0.24565
Q224P	6910.000	<	0.00862	5.25424	1.26914
Q224Q	6541.000		0.01352	1.01403	0.23928
Q224R	6272.000	<	0.00898	5.06981	1.23217
Q224S	6018.000		0.01270	0.75881	0.19049
Q224T	7364.000		0.01431	0.94416	0.22041
Q224U	5340.000	<	0.00960	4.90900	1.22503

0.01292 AVG	1.79956 AVG	0.43996 AVG
0.002549 SD	1.733179 SD	0.431355 SD
19.725803 %RSD	96.311417 %RSD	98.045197 %RSD

S626F	9345.000		0.07804	0.70964	<	0.00644
S626G	11253.000		0.07797	0.72877	<	0.00559
			0.07800 AVG	0.71921 AVG		0.00000 AVG
			0.000050 SD	0.013530 SD		0.000000 SD
			0.063759 %RSD	1.881175 %RSD		0.000000 %RSD

S604E	10231.000	<	0.00565	1.96538	0.09555
S604F	7303.000	<	0.00659	2.00747	0.10282
S604G	6894.000	<	0.00703	2.00316	0.10280
			0.000000 AVG	1.99200 AVG	0.10039 AVG
			0.000000 SD	0.023157 SD	0.004191 SD
			0.000000 %RSD	1.162480 %RSD	4.174226 %RSD

SAMPLE	SAM. WT	%-COPPER	%-ARSENIC	%-SILICON
Q222A	10256.000	0.01219	0.73380	0.18409
Q222B	12375.000	0.01140	0.68294	0.18536
Q222C	10287.000	0.01290	0.74318	0.19449
Q222D	8484.000	0.01097	0.88152	0.25115
Q222E	7246.000	0.01528	1.05429	0.29040
Q222F	8903.000	0.01199	0.71166	0.17955
Q222G	10368.000	0.01162	0.67707	0.18653
Q222H	8009.000	0.00672	4.83814	1.25250
Q222I	8515.000	0.01016	0.92341	0.24024
Q222J	5933.000	0.01354	0.71002	0.18528
Q222K	7218.000	0.01474	2.09097	0.56638
Q222L	8711.000	0.01254	0.73773	0.19728
Q222M	9700.000	0.01289	0.76374	0.19429
Q222N	9779.000	0.01190	0.71577	0.18822
Q222O	9124.000	0.01363	1.84256	0.50153
Q222P	8006.000	0.01289	0.73458	0.20202
Q222Q	8321.000	0.01068	0.92867	0.24576
Q222R	8045.000	0.01670	1.01699	0.27496
Q222S	8163.000	0.01233	0.71149	0.18325
Q222T	8652.000	0.01650	0.62954	0.16913

0.01289 AVG 1.10640 AVG 0.29362 AVG  
 0.002337 SD 0.958025 SD 0.249258 SD  
 18.138187 %RSD 86.589149 %RSD 84.891121 %RSD

Q223A	9945.000	0.01352	0.99243	0.25924
Q223B	6360.000	0.00979	0.73941	0.19741
Q223C	6922.000	0.01106	0.69647	0.18773
Q223D	7372.000	0.01252	1.12415	0.29577
Q223E	6348.000	0.00842	4.73151	1.28460
Q223F	7145.000	0.01031	0.67147	0.18301
Q223G	5566.000	0.01197	0.67792	0.18738
Q223H	7719.000	0.01425	0.61100	0.16409
Q223I	6110.000	0.01547	1.36434	0.34890
Q223J	7710.000	0.01378	0.64780	0.17647
Q223K	5883.000	0.00959	5.22146	1.36820

0.01252 AVG 1.58890 AVG 0.42298 AVG  
 0.002608 SD 1.694853 SD 0.450713 SD  
 20.834007 %RSD 106.668091 %RSD 106.556419 %RSD

Q223L	6120.000	0.00060	0.00024	0.00168
Q223M	5611.000	0.01345	0.67018	0.17887
Q223N	6722.000	0.01772	1.83282	0.49636
Q223O	6078.000	0.00961	0.74022	0.18692
Q223P	8155.000	0.01219	0.83573	0.22116
Q223Q	5228.000	0.01320	0.72062	0.19530
Q223R	6434.000	0.01424	0.77473	0.21341
Q223S	5488.000	0.01136	0.77152	0.20834
Q223T	6464.000	0.01203	0.70578	0.18767

0.01297 AVG 0.88145 AVG 0.23600 AVG  
 0.002387 SD 0.387661 SD 0.106200 SD  
 18.393616 %RSD 43.979923 %RSD 44.999252 %RSD

Q224A	4863.000	0.01146	5.41866	1.47710
Q224B	8218.000	0.01479	0.99204	0.25531
Q224C	8397.000	0.01627	1.83595	0.49508

Q224D	7322.000		0.01333	0.68108	0.18733
Q224E	7770.000		0.01235	0.70418	0.18209
Q224F	8343.000		0.01458	0.80052	0.21860
Q224G	7065.000		0.01478	0.73879	0.19073
Q224H	8409.000		0.01344	0.85113	0.23326
Q224I	6837.000		0.01298	0.74025	0.19312
Q224J	8286.000		0.01257	0.75442	0.20276
Q224K	8086.000		0.01193	1.17611	0.31202
Q224L	7003.000		0.01122	0.72659	0.20017
Q224M	6525.000		0.00951	0.91911	0.23992
Q224N	7827.000		0.01259	0.89216	0.24243
Q224O	6910.000	<	0.01045	4.83926	1.29577
Q224P	6541.000		0.01054	0.90982	0.24220
Q224Q	6272.000	<	0.01108	4.75455	1.30459
Q224R	6018.000		0.01266	0.72672	0.19149
Q224S	7364.000		0.01757	0.81902	0.20691
Q224T	5340.000	<	0.01236	5.00049	1.33024

0.01320 AVG	1.71550 AVG	0.46006 AVG
0.002299 SD	1.709132 SD	0.463779 SD
17.423128 %RSD	99.628937 %RSD	100.809113 %RSD

S626D	11377.000		0.07989	0.75312	<	0.00483
S626E	9345.000		0.07638	0.73129		0.00487
S626F	11253.000		0.07729	0.68120	<	0.00486

0.07785 AVG	0.72187 AVG	0.00487 AVG
0.001823 SD	0.036878 SD	0.000000 SD
2.340991 %RSD	5.108644 %RSD	0.000000 %RSD

S604D	10231.000	<	0.00497	1.85427	0.09811
S604E	7303.000	<	0.00569	1.77036	0.09851
S604F	6894.000	<	0.00606	1.88973	0.10453

0.00000 AVG	1.83812 AVG	0.10038 AVG
0.000000 SD	0.061303 SD	0.003596 SD
0.000000 %RSD	3.335106 %RSD	3.582222 %RSD

S626J	8982.000		0.07034	0.71794	<	0.00510
S626K	7574.000		0.07594	0.72804	<	0.00566
S626L	9076.000		0.07500	0.70812	<	0.00497

0.07376 AVG	0.71804 AVG	0.00000 AVG
0.003002 SD	0.009959 SD	0.000000 SD
4.069747 %RSD	1.386928 %RSD	0.000000 %RSD

(TI)TITLE: 91119065 QY, RF FIFTH IRRADIATION PART TWO  
 (LN)LIBRARY:  
 (SA)SAMPLE TIME: 10JAN80 1146:00  
 (SE)STD ENERGY TOLERANCE: 2.00  
 (UE)UNK ENERGY TOLERANCE: 2.00  
 (TF)THERMAL FLUX: 0.0000E-01  
 (EP)EPITHERMAL FLUX: 0.0000E-01  
 (FF)FAST FLUX: 0.0000E-01  
 (QU)UNITS: UG

	ELEMENT	ENERGY	HALF-LIFE	SEC
1	Z-COPPER	511.00	1.2800E 01 H	4.6080E 04
2	Z-ANTIMONY	564.09	2.7200E 00 D	2.3501E 05
3	Z-ARSENIC	657.41	2.6300E 01 H	9.4680E 04

# STANDARD SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	S626D	11377.00	FB11 .A01	100.0	100000.0
2	S626E	9345.00	FB11 .A02	100.0	100000.0
3	S626F	11253.00	FB11 .A03	100.0	100000.0
4	S604D	10231.00	FB11 .A04	100.0	100000.0
5	S604E	7303.00	FB11 .A05	100.0	100000.0
6	S604F	6894.00	FB11 .A06	100.0	100000.0

STD: 1 S626D FILE= FB11 .A01

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	7.8000E-02	0.0000E-01
2	Z-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	Z-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 2 S626E FILE= FB11 .A02

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	7.8000E-02	0.0000E-01
2	Z-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	Z-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 3 S626F FILE= FB11 .A03

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	7.8000E-02	0.0000E-01
2	Z-ANTIMONY	564.09	7.2000E-01	0.0000E-01
3	Z-ARSENIC	657.41	0.0000E-01	0.0000E-01

STD: 4 S604D FILE= FB11 .A04

	ELEMENT	ENERGY	CONC	ERROR
1	Z-COPPER	511.00	0.0000E-01	0.0000E-01
2	Z-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	Z-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 5 S604E FILE= FB11 .A05

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

STD: 6 5604F

FILE= FB11 .A06

	ELEMENT	ENERGY	CONC	ERROR
1	%-COPPER	511.00	0.0000E-01	0.0000E-01
2	%-ANTIMONY	564.09	0.0000E-01	0.0000E-01
3	%-ARSENIC	657.41	1.0000E-01	0.0000E-01

# UNKNOWN SAMPLES

	NAME	MASS	FILE	POWER	ACT TIME
1	Q222A	10256.00	FB11 .A07	100.0	100000.0
2	Q222B	12375.00	FB11 .A08	100.0	100000.0
3	Q222C	10287.00	FB11 .A09	100.0	100000.0
4	Q222D	8484.00	FB11 .A10	100.0	100000.0
5	Q222E	7246.00	FB11 .A11	100.0	100000.0
6	Q222F	8903.00	FB11 .A12	100.0	100000.0
7	Q222G	10368.00	FB11 .A13	100.0	100000.0
8	Q222H	8009.00	FB11 .A14	100.0	100000.0
9	Q222I	8515.00	FB11 .A15	100.0	100000.0
10	Q222J	5933.00	FB11 .A16	100.0	100000.0
11	Q222K	7218.00	FB11 .A17	100.0	100000.0
12	Q222L	8711.00	FB11 .A18	100.0	100000.0
13	Q222M	9700.00	FB11 .A19	100.0	100000.0
14	Q222N	9779.00	FB11 .A20	100.0	100000.0
15	Q222O	9124.00	FB11 .A21	100.0	100000.0
16	Q222P	8006.00	FB11 .A22	100.0	100000.0
17	Q222Q	8321.00	FB11 .A23	100.0	100000.0
18	Q222R	8045.00	FB11 .A24	100.0	100000.0
19	Q222S	8163.00	FB11 .A25	100.0	100000.0
20	Q222T	8652.00	FB11 .A26	100.0	100000.0
21	Q223A	9945.00	FB11 .A27	100.0	100000.0
22	Q223B	6360.00	FB11 .A28	100.0	100000.0
23	Q223C	6922.00	FB11 .A29	100.0	100000.0
24	Q223D	7372.00	FB11 .A30	100.0	100000.0
25	Q223E	6348.00	FB11 .A31	100.0	100000.0
26	Q223F	7145.00	FB11 .A32	100.0	100000.0
27	Q223G	5566.00	FB11 .A33	100.0	100000.0
28	Q223H	7719.00	FB11 .A34	100.0	100000.0
29	Q223I	6110.00	FB11 .A35	100.0	100000.0
30	Q223J	7710.00	FB11 .A36	100.0	100000.0
31	Q223K	5883.00	FB11 .A37	100.0	100000.0
32	Q223L	6120.00	FB11 .A38	100.0	100000.0
33	Q223M	5611.00	FB11 .A39	100.0	100000.0
34	Q223N	6722.00	FB11 .A40	100.0	100000.0
35	Q223O	6078.00	FB11 .A41	100.0	100000.0
36	Q223P	8155.00	FB11 .A42	100.0	100000.0
37	Q223Q	5228.00	FB11 .A43	100.0	100000.0
38	Q223R	6434.00	FB11 .A44	100.0	100000.0
39	Q223S	5488.00	FB11 .A45	100.0	100000.0
40	Q223T	6464.00	FB11 .A46	100.0	100000.0
41	Q224A	4863.00	FB11 .A47	100.0	100000.0
42	Q224B	8218.00	FB11 .A48	100.0	100000.0
43	Q224C	8397.00	FB11 .A49	100.0	100000.0
44	Q224D	7322.00	FB11 .A50	100.0	100000.0
45	Q224E	7770.00	FB11 .A51	100.0	100000.0
46	Q224F	8343.00	FB11 .A52	100.0	100000.0
47	Q224G	7065.00	FB11 .A53	100.0	100000.0
48	Q224H	8409.00	FB11 .A54	100.0	100000.0
49	Q224I	6837.00	FB11 .A55	100.0	100000.0

50	Q224J	8286.00	FBI1	.A56	100.0	100000.0
51	Q224K	8086.00	FBI1	.A57	100.0	100000.0
52	Q224L	8003.00	FBI1	.A58	100.0	100000.0
53	Q224M	8525.00	FBI1	.A59	100.0	100000.0
54	Q224N	7827.00	FBI1	.A60	100.0	100000.0
55	Q224O	6910.00	FBI1	.A61	100.0	100000.0
56	Q224P	6541.00	FBI1	.A62	100.0	100000.0
57	Q224Q	6272.00	FBI1	.A63	100.0	100000.0
58	Q224R	6018.00	FBI1	.A64	100.0	100000.0
59	Q224S	7364.00	FBI1	.A65	100.0	100000.0
60	Q224T	5340.00	FBI1	.A66	100.0	100000.0
61	S626D	11377.00	FBI1	.A01	100.0	100000.0
62	S626E	9345.00	FBI1	.A02	100.0	100000.0
63	S626F	11253.00	FBI1	.A03	100.0	100000.0
64	S604D	10231.00	FBI1	.A04	100.0	100000.0
65	S604E	7303.00	FBI1	.A05	100.0	100000.0
66	S604F	6894.00	FBI1	.A06	100.0	100000.0
67	S626J	8982.00	FBI1	.A67	100.0	100000.0
68	S626K	7574.00	FBI1	.A68	100.0	100000.0
69	S626L	9076.00	FBI1	.A69	100.0	100000.0



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 \*\*\*\*\* 14 JAN 1980 8:52:20 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: 56260

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 11377.00

UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 11JAN80 2030:49 \* FWHM(1332) 2.390

PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000

ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %

ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GELI-8

\* LIBRARY:NUCL.LIB1

DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV

KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00

OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

ENERGY WINDOW 499.787 10 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	1	510.85	7390.	4631.	2.77	1022.	11	1012	21	1.232E 01	1.7 1.94E 00
2	2	560.27	1643.	1442.	2.12	1120.	87	1108	31	2.739E 00	4.1 7.95E 01
3	2	563.99	160738.	1057.	1.84	1128.	32	1108	31	2.679E 02	0.3
4	1	602.65	9159.	1109.	1.84	1205.	58	1196	17	1.527E 01	1.2 5.07E 00
5	1	645.83	652.	837.	1.91	1291.	86	1286	17	1.086E 00	7.4 1.69E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1. SIGMA)	CONSTANT	ERROR (1. SIGMA)
%-COPPER	511.0	7390.	7.8000E-02	0.0000E-01	8.2109E-02	1.4337E-03
%-ANTIMONY	564.1	160738.	7.2000E-01	0.0000E-01	4.6343E-02	1.1635E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

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 \*\*\*\*\* 14 JAN 1980 8:53:29 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 5626E  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 9345.000  
 SAMPLE GEOMETRY: AFFRI 55 INCON  
 EFFICIENCY FILE NAME: EFF.TAB1

UNITS: UG

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 \*  
 ACQUISITION DATE: 11JAN80 2041:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	510.84	5748.	4272.	2.76	1022.09	1011.	24	9.581E 00	2.1	1.64E 00
2	1	564.01	127964.	4169.	1.83	1128.34	1120.	17	2.133E 02	0.3	1.04E 02
3	1	602.66	7403.	990.	1.85	1205.60	1194.	22	1.234E 01	1.3	4.63E 01
4	1	645.86	458.	522.	1.74	1291.92	1286.	14	7.640E-01	8.5	1.36E 00
5	1	657.23	96.	333.	2.02	1314.65	1311.	10	1.597E-01	28.8	1.93E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	5748.	7.8000E-02	0.0000E-01	7.8497E-02	1.6325E-03
%-ANTIMONY	564.1	127964.	7.2000E-01	0.0000E-01	4.4999E-02	1.2983E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

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\*\*\*\*\* 14 JAN 1980 8:54:36 AM \*\*\*\*\*  
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91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
SAMPLE IDENTIFICATION: 5626F  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 11253.00  
SAMPLE GEOMETRY: AFFRI 55 INCON  
EFFICIENCY FILE NAME: EFF.TAB1

UNITS: UG

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ACQUISITION DATE: 11JAN80 2051:54 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*\*\*\*\*

\*\*\*\*\*  
DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	1	510.85	6939.	5207.	2.80	1022.11	1011	26	1.156E 01	1.9	1.81E 00
2	2	560.07	1392.	1433.	2.11	1120.48	1109	45	2.319E 00	4.7	5.20E 01
3	2	564.00	143267.	1082.	1.83	1128.33	1109	45	2.388E 02	0.3	
4	1	602.68	8667.	1326.	1.84	1205.62	1194	24	1.444E 01	1.2	5.66E 00
5	1	645.79	623.	688.	2.05	1291.78	1284	16	1.039E 00	7.2	2.09E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	6939.	7.0000E-02	0.0000E-01	7.9441E-02	1.5081E-03
%-ANTIMONY	564.1	143267.	7.2000E-01	0.0000E-01	4.1917E-02	1.1158E-04
%-ARSENIC	657.4	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01

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\*\*\*\*\* 14 JAN 1980 8:55:38 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
SAMPLE IDENTIFICATION: S604D  
TYPE OF SAMPLE: STANDARD  
SAMPLE QUANTITY: 10231.00 UNITS: UG  
SAMPLE GEOMETRY: AFFR1 55 INCOR  
EFFICIENCY FILE NAME: EFF.TAB1

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\*  
ACQUISITION DATE: 11JAN80 2102:28 \* FWHM(1332) 2.390  
PRESFT TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
\*

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\*  
DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	2	559.08	24276.	3836.	2.14	1118.49	1107	35	4.046E 01	0.7	1.08E 02
2	2	563.97	353887.	3027.	1.87	1128.27	1107	35	5.898E 02	0.2	
3	1	602.64	20757.	4085.	1.85	1205.54	1195	19	3.459E 01	0.8	6.98E 01
4	1	645.70	1432.	2258.	2.11	1291.61	1285	15	2.387E 00	5.4	1.89E 00
5	1	656.98	2094.	1855.	1.89	1314.14	1308	14	3.490E 00	3.6	6.53E-01

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	2094.	1.0000E-01	0.0000E-01	8.2163E-03	2.9895E-04

\*\*\*\*\*  
\*\*\*\*\* 14 JAN 1980 8:56:38 AM \*\*\*\*\*  
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91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: S604E

TYPE OF SAMPLE: STANDARD

SAMPLE QUANTITY: 7303.000

UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR

EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 11JAN80 2113:34 \* FWHM(1332) 2.390  
PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
ELAPSED REAL TIME: 635. SEC \* SHAPE PARAMETER : 15.0 %  
ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
\*

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ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR	FIT
1	2	559.08	16697.	2618.	2.07	1118.49	1108	34	2.783E 01	0.9	9.13E 01
2	2	503.99	240710.	1908.	1.85	1128.31	1108	34	4.012E 02	0.2	
3	1	602.66	14790.	1971.	1.91	1205.58	1195	18	2.465E 01	0.9	9.59E 01
4	1	645.87	973.	1454.	1.89	1291.94	1285	17	1.621E 00	6.4	1.21E 00
5	1	657.00	1493.	1232.	1.88	1314.19	1307	16	2.489E 00	4.2	1.35E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	1493.	1.0000E-01	0.0000E-01	8.2496E-03	3.4750E-04

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 \*\*\*\*\* 14 JAN 1980 8:57:40 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S604F  
 TYPE OF SAMPLE: STANDARD  
 SAMPLE QUANTITY: 6894.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 11JAN80 2124:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

ENERGY WINDOW 499.787 TO 674.920

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR	FIT
1	2	559.08	16336.	2671.	2.12	1118.50	1108	35	2.723E 01	0.9	8.70E 01
2	2	563.99	242090.	1988.	1.86	1128.31	1108	35	4.035E 02	0.2	
3	1	602.66	14361.	2274.	1.83	1205.58	1196	17	2.393E 01	1.0	7.78E 01
4	1	645.80	1061.	1665.	2.05	1291.81	1284	20	1.768E 00	6.2	1.17E 00
5	1	656.97	1489.	1211.	1.98	1314.13	1306	15	2.481E 00	4.2	1.89E 00

PEAK SEARCH COMPLETED

STANDARD REPORT:

ELEMENT	ENERGY	AREA	CONCENTR.	ERROR (1 SIGMA)	CONSTANT	ERROR (1 SIGMA)
%-COPPER	511.0	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ANTIMONY	564.1	0.	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
%-ARSENIC	657.4	1489.	1.0000E-01	0.0000E-01	8.7537E-03	3.6770E-04

# SUMMARY OF STANDARD CONSTANTS:

## 1. ELEMENT %-COPPER AT 511.00 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626D	7.8000E-02	8.2109E-02	1.4337E-03
S626E	7.8000E-02	7.8497E-02	1.6325E-03
S626F	7.8000E-02	7.9441E-02	1.5081E-03
<hr/>			
MEAN CONSTANT,	3 STDS:	8.0166E-02	8.7658E-04

## 2. ELEMENT %-ANTIMONY AT 564.09 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S626D	7.2000E-01	4.6343E-02	1.1635E-04
S626E	7.2000E-01	4.4999E-02	1.2983E-04
S626F	7.2000E-01	4.1917E-02	1.1158E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	4.4305E-02	6.8434E-05

## 3. ELEMENT %-ARSENIC AT 657.41 KEV

STANDARD NAME	CONCENTR.	CONSTANT	ERROR (1 SIGMA)
S604D	1.0000E-01	8.2163E-03	2.9895E-04
S604E	1.0000E-01	8.2496E-03	3.4750E-04
S604F	1.0000E-01	8.7537E-03	3.6770E-04
<hr/>			
MEAN CONSTANT,	3 STDS:	8.3745E-03	1.9293E-04

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 \*\*\*\*\* 14 JAN 1980 8:59:14 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: 0222A

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 10256.00 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR

EFFICIENCY FILE NAME: FFF.TAB1

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ACQUISITION DATE: 11JAN80 941:47 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELFMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER	510.6	4564.	1825.	0.0122	0.0007	5.8
X-ANTIMONY	563.8	1803.	158360.	0.7338	0.0022	0.3
X-ARSENIC	656.9	1553.	5311.	0.1841	0.0053	2.9

1009:	328.	318.	322.	283.	307.	282.	336.	294.	366.
1018:	386.	460.	533.	577.	590.	531.	460.	401.	382.
1027:	322.	271.	278.	274.	275.	298.	303.	290.	268.
1117:	10315.	12951.	11714.	6870.	2707.	1190.	1270.	2834.	7713.
1126:	18319.	31446.	39420.	33788.	18714.	6141.	1342.	320.	228.
1135:	204.	203.	207.	167.	162.	202.	173.	190.	199.
1301:	85.	84.	90.	87.	82.	97.	87.	92.	127.
1310:	187.	383.	786.	1136.	1329.	1192.	601.	269.	135.
1319:	80.	59.	80.	87.	89.	83.	74.	90.	85.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1.	1	510.59	1825.	4564.	2.85	1021.58	1014	16	3.042E 00	5.7
2.	2	558.89	52563.	2195.	1.94	1118.12	1108	33	8.761E 01	0.5
3.	2	563.85	158360.	1803.	1.91	1128.02	1108	33	2.639E 02	0.3
4.	1	602.50	8741.	1881.	1.96	1205.27	1195	18	1.457E 01	1.3
5.	1	645.59	665.	1436.	2.25	1291.38	1283	18	1.109E 00	8.9
6.	1	656.85	5311.	1553.	1.97	1313.90	1305	18	8.851E 00	1.7
7.	1	665.19	277.	972.	1.66	1330.56	1325	12	4.617E-01	17.0



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 \*\*\*\*\* 14 JAN 1980 9:00:27 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0222B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 12375.00 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 952:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	4819.	2040.	0.0114	0.0006	5.4
%-ANTIMONY	563.8	1939.	177497.	0.6829	0.0019	0.3
%-ARSENIC	656.8	1571.	6422.	0.1854	0.0051	2.8

1009:	360.	375.	336.	382.	321.	331.	348.	393.	406.
1018:	470.	487.	528.	617.	643.	615.	525.	435.	395.
1027:	350.	308.	325.	353.	325.	341.	328.	342.	296.

1117:11753.	14911.	13452.	7858.	3062.	1407.	1441.	3270.	8785.	
1126:20446.	35165.	44085.	37927.	20721.	7096.	1485.	416.	288.	
1135:	248.	230.	220.	195.	207.	199.	210.	223.	229.

1301:	108.	108.	91.	89.	108.	95.	122.	98.	133.
1310:	221.	468.	928.	1338.	1677.	1292.	777.	308.	159.
1319:	96.	79.	85.	84.	102.	82.	74.	90.	107.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.65	2040.	4819.	3.11	1021.71	1014	15	3.400F 00	5.3
2	2	558.89	60533.	2390.	1.95	1118.12	1108	32	1.009F 02	0.4
3	2	563.85	177497.	1939.	1.91	1128.02	1108	32	2.958F 02	0.2
4	1	602.50	9915.	2300.	1.90	1205.26	1197	18	1.652E 01	1.2
5	1	645.57	556.	1404.	1.87	1291.35	1285	13	9.264E-01	10.4
6	1	656.84	6422.	1571.	1.98	1313.87	1304	18	1.070E 01	1.5
7	1	664.97	388.	927.	2.03	1330.11	1325	11	6.473E-01	12.2

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 \*\*\*\*\* 14 JAN 1980 9:01:39 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q222C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10287.00 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1003:15 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	4624.	1900.	0.0129	0.0007	5.7
%-ANTIMONY	563.9	1668.	160259.	0.7432	0.0022	0.3
%-ARSENIC	656.8	1397.	5575.	0.1945	0.0055	2.8

1009:	302.	293.	305.	315.	315.	295.	308.	315.	381.
1018:	385.	472.	516.	563.	569.	525.	470.	428.	370.
1027:	296.	319.	296.	250.	292.	287.	280.	315.	278.

1117:10430.	13146.	11789.	6851.	2750.	1144.	1321.	2717.	7971.	
1126:18379.	31662.	39708.	34038.	19105.	6230.	1399.	371.	196.	
1135:	210.	186.	193.	159.	167.	175.	173.	191.	196.

1301:	65.	85.	78.	79.	92.	87.	85.	92.	119.
1310:	210.	393.	797.	1224.	1408.	1109.	665.	269.	102.
1319:	79.	77.	63.	68.	70.	80.	85.	90.	88.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.67	1900.	4624.	3.24	1021.75	1014	16	3.167E 00	5.6
2	1	558.89	53072.	2029.	1.93	1118.11	1107	34	8.845E 01	0.5
3	1	563.85	160259.	1668.	1.92	1128.03	1107	34	2.671E 02	0.3
4	1	602.48	8708.	2519.	1.97	1205.23	1195	22	1.451E 01	1.3
5	1	645.77	599.	1449.	2.29	1291.75	1285	18	9.986E-01	9.9
6	1	656.83	5575.	1397.	1.99	1313.84	1303	19	9.292E 00	1.6
7	1	664.95	306.	1024.	2.15	1330.08	1323	13	5.104E-01	15.8

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 \*\*\*\*\* 14 JAN 1980 9:02:48 AM \*\*\*\*\*  
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91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0222D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8484.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1013:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.8	4451.	1321.	0.0110	0.0008	7.7
Z-ANTIMONY	563.8	1512.	156477.	0.8815	0.0026	0.3
Z-ARSENIC	656.8	1359.	5910.	0.2512	0.0070	2.8

1009:	322.	309.	317.	311.	317.	295.	312.	325.	315.
1018:	341.	379.	490.	501.	514.	532.	437.	359.	349.
1027:	303.	278.	278.	302.	271.	300.	287.	301.	270.
1117:10889.	13558.	12132.	7071.	2764.	1167.	1188.	2806.	7896.	
1126:18025.	30844.	38634.	33275.	18339.	6172.	1282.	330.	204.	
1135:	205.	203.	152.	181.	154.	160.	195.	179.	157.
1301:	83.	78.	77.	85.	80.	95.	92.	107.	132.
1310:	228.	422.	851.	1200.	1468.	1240.	670.	254.	104.
1319:	76.	90.	60.	71.	63.	78.	78.	80.	69.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.75	1321.	4451.	2.61	1021.91	1015	15	2.201E 00	7.7
2	1	558.88	55078.	1872.	1.94	1118.10	1107	33	9.180E 01	0.4
3	1	563.85	156477.	1512.	1.92	1128.02	1107	33	2.608E 02	0.3
4	1	602.51	9053.	1755.	1.98	1205.28	1195	18	1.509E 01	1.2
5	1	645.71	650.	1526.	2.21	1291.62	1286	18	1.083E 00	9.4
6	1	656.84	5910.	1359.	2.02	1313.87	1303	19	9.849E 00	1.6
7	1	664.98	310.	899.	1.92	1330.14	1325	11	5.173E-01	14.8

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 \*\*\*\*\* 14 JAN 1980 9:04:00 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0222E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7246.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1024:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
Z-COPPER	510.7	4922.	1556.	0.0153	0.0011	6.9
Z-ANTIMONY	563.8	1670.	159535.	1.0543	0.0031	0.3
Z-ARSENIC	656.9	1252.	5809.	0.2904	0.0081	2.8

1009:	322.	327.	309.	323.	264.	290.	344.	345.	344.
1018:	347.	418.	469.	569.	513.	514.	462.	391.	338.
1027:	302.	293.	283.	288.	261.	267.	278.	272.	285.

1117:	10824.	13574.	12291.	7014.	2793.	1199.	1273.	2887.	7920.
1126:	18556.	31879.	39211.	33987.	18626.	6208.	1334.	308.	201.
1135:	194.	180.	174.	156.	151.	166.	170.	198.	182.

1301:	97.	96.	79.	84.	87.	73.	77.	104.	143.
1310:	215.	405.	786.	1212.	1488.	1262.	690.	280.	115.
1319:	80.	74.	73.	80.	74.	86.	73.	70.	98.

PULSE-PILF-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.67	1556.	4922.	2.85	1021.	76	1013	17 2.593E 00	6.9
2	2	558.89	55113.	2065.	1.94	1118.	11	1107	34 9.185E 01	0.4
3	2	563.84	159535.	1670.	1.92	1128.	01	1107	34 2.659E 02	0.3
4	1	602.50	8836.	1816.	1.91	1205.	26	1197	16 1.473E 01	1.3
5	1	645.59	714.	1133.	2.17	1291.	38	1285	15 1.189E 00	7.6
6	1	656.87	5809.	1252.	1.97	1313.	93	1306	16 9.681E 00	1.6
7	1	665.19	316.	1105.	1.92	1330.	56	1325	13 5.268E-01	15.9

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 \*\*\*\*\* 14 JAN 1980 9:05:09 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q222F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8903.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1035:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGD	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.8	3732.	1485.	0.00120	0.0008	6.5
Z-ANTIMONY	563.8	1386.	132065.	0.7117	0.0023	0.3
Z-ARSENIC	656.8	1125.	4392.	0.1796	0.0053	3.0

1009:	256.	267.	265.	246.	251.	237.	246.	255.	292.
1018:	279.	354.	416.	425.	469.	437.	421.	350.	290.
1027:	269.	233.	230.	215.	236.	208.	254.	251.	220.
1117:	8564.	10637.	9605.	5642.	2196.	923.	1001.	2336.	6596.
1126:	15222.	26343.	32899.	27918.	15516.	5215.	1043.	270.	144.
1135:	137.	117.	134.	124.	130.	116.	125.	134.	135.
1301:	69.	73.	79.	52.	67.	64.	72.	83.	84.
1310:	150.	296.	613.	960.	1178.	892.	546.	201.	108.
1319:	67.	58.	43.	69.	62.	45.	63.	59.	62.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.84	1485.	3732.	3.03	1022.10	1014	16	2.475E 00	6.4
2	2	558.89	42962.	1741.	1.92	1118.12	1107	35	7.160E 01	0.5
3	2	563.84	132065.	1386.	1.91	1128.02	1107	35	2.201E 02	0.3
4	1	602.50	7280.	1458.	1.96	1205.27	1197	17	1.213E 01	1.4
5	1	645.54	445.	874.	1.98	1291.28	1286	13	7.418E-01	10.5
6	1	656.85	4392.	1125.	1.92	1313.88	1305	18	7.320E 00	1.9
7	1	665.21	266.	655.	1.75	1330.60	1325	11	4.441E-01	14.9

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 \*\*\*\*\* 14 JAN 1980 9:06:19 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0222G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10368.00 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1046:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 627. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.7	4095.	1660.	0.0116	0.0007	6.1
Z-ANTIMONY	563.8	1523.	146045.	0.6771	0.0021	0.3
Z-ARSENIC	656.9	1036.	5289.	0.1865	0.0053	2.8

1009:	266.	264.	239.	289.	310.	266.	274.	325.	311.
1018:	333.	406.	491.	527.	582.	509.	479.	376.	333.
1027:	306.	267.	274.	278.	288.	271.	291.	286.	261.
1117:10050.	12238.	10893.	6373.	2581.	1089.	1169.	2699.	7265.	
1126:16836.	28950.	36104.	30864.	17350.	5654.	1171.	300.	199.	
1135:	145.	165.	168.	142.	145.	138.	154.	146.	169.
1301:	79.	68.	85.	75.	75.	67.	79.	84.	97.
1310:	186.	381.	730.	1106.	1342.	1112.	623.	230.	93.
1319:	76.	62.	55.	62.	56.	58.	62.	57.	77.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.73	1660.	4095.	2.67	1021.86	1015	15	2.767E 00	6.0
2	1	558.88	49870.	1873.	1.94	1118.09	1107	35	8.312E 01	0.5
3	1	563.85	146045.	1523.	1.92	1128.02	1107	35	2.434E 02	0.3
4	1	571.59	111.	1224.	1.68	1143.49	1141	9	1.857E-01	45.4
5	1	602.50	8069.	1674.	1.95	1205.27	1195	18	1.345E 01	1.3
6	1	645.58	577.	931.	2.27	1291.36	1286	14	9.613E-01	8.6
7	1	656.85	5289.	1036.	1.98	1313.90	1306	16	8.815E 00	1.6
8	1	664.98	349.	718.	1.90	1330.14	1326	11	5.811E-01	12.1

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 \*\*\*\*\* 14 JAN 1980 9:07:31 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0222H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8009.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1056:42 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 768. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	24698.	0. <	0.0067	NOT DETECTABLE	
%-ANTIMONY	563.7	13811.	804458.	4.8381	0.0093	0.2
%-ARSENIC	656.7	14518.	27290.	1.2525	0.0309	2.5

1009: 2024.	1918.	1889.	1913.	1922.	1949.	1874.	1898.	1854.
1018: 1892.	1881.	1927.	2007.	1993.	1972.	1970.	1823.	1785.
1027: 1904.	1792.	1765.	1771.	1759.	1787.	1780.	1798.	1763.

1117:56746.	65028.	53003.	29588.	12662.	7473.	10021.	22908.	55570.
1126111577.	171157.	190727.	150074.	78568.	27883.	8973.	4977.	3998.
1135: 3429.	3255.	3011.	2741.	2613.	2516.	2474.	2458.	2414.

1301: 807.	902.	802.	860.	860.	891.	919.	911.	1138.
1310: 1643.	2890.	4939.	6703.	6960.	5644.	3214.	1626.	1033.
1319: 885.	877.	834.	862.	859.	811.	818.	819.	912.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	3	558.76	269953.	13905.	2.03	1117.85	1106	43	4.499E 02	0.2
2	3	563.71	804458.	13811.	2.00	1127.75	1106	43	1.341E 03	0.1
3	3	570.91	3043.	17587.	2.57	1142.13	1106	43	5.071E 00	6.4
4	1	602.37	42777.	22608.	1.99	1205.01	1196	18	7.130E 01	0.7
5	1	631.18	279.	9908.	1.40	1262.59	1259	10	4.656E-01	50.7
6	1	645.49	2542.	10899.	1.97	1291.18	1286	12	4.236E 00	6.1
7	1	656.72	27290.	14518.	2.04	1313.62	1305	17	4.548E 01	0.9
8	1	664.98	1745.	8828.	2.22	1330.14	1325	11	2.908E 00	8.0



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 \*\*\*\*\* 14 JAN 1980 9:08:40 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 02221  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8515.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.1AB1

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 \*  
 ACQUISITION DATE: 11JAN80 1109:44 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%.  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	510.7	4721.	1167.	0.0102	0.0009	8.9
%-ANTIMONY	563.8	1700.	162896.	0.9234	0.0027	0.3
%-ARSENIC	656.8	1490.	5536.	0.2402	0.0068	2.8

1009:	325.	308.	304.	323.	299.	342.	324.	311.	320.
1018:	372.	389.	498.	478.	507.	522.	443.	365.	329.
1027:	323.	329.	296.	297.	278.	292.	302.	314.	289.
1117:10792.	13643.	12130.	7176.	2894.	1161.	1326.	2978.	8087.	
1126:18888.	32316.	40311.	34753.	19041.	6314.	1356.	368.	221.	
1135:	209.	205.	172.	156.	158.	181.	182.	181.	187.
1301:	91.	89.	78.	80.	82.	74.	80.	104.	135.
1310:	180.	404.	743.	1239.	1471.	1193.	643.	267.	113.
1319:	74.	64.	57.	70.	92.	83.	75.	77.	100.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	C/S/SEC	%ERR
1	1	510.72	1167.	4721.	2.59	1021.85	1015	15	1.944E 00	8.8
2	1	558.89	55265.	2044.	1.94	1118.11	1107	34	9.211E 01	0.4
3	1	563.85	162896.	1700.	1.92	1128.02	1107	34	2.715E 02	0.3
4	1	602.50	9181.	2134.	1.92	1205.27	1194	22	1.530E 01	1.3
5	1	645.63	586.	1288.	1.80	1291.46	1284	16	9.761E-01	9.6
6	1	656.85	5536.	1490.	1.90	1313.89	1306	18	9.227E 00	1.7
7	1	664.99	253.	1183.	1.87	1330.16	1325	13	4.214E-01	20.2



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 \*\*\*\*\* 14 JAN 1980 9:09:48 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: 0222J

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5933.000

UNITS: UG

SAMPLE GEOMETRY: AFFR1 55 INCOR

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 11JAN80 1120:26 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	2639.	1073.	0.0135	0.0010	7.5
Z-ANTIMONY	563.9	856.	87109.	0.7100	0.0027	0.4
Z-ARSENIC	656.9	581.	2961.	0.1853	0.0059	3.2

1009:	184.	177.	145.	156.	163.	187.	167.	181.	168.
1018:	166.	235.	277.	306.	322.	301.	272.	207.	188.
1027:	204.	162.	142.	171.	126.	138.	135.	165.	145.
1117:	5505.	7135.	6355.	3656.	1478.	616.	661.	1481.	4183.
1126:	9862.	17408.	21719.	18697.	10340.	3441.	728.	133.	87.
1135:	83.	81.	76.	77.	86.	72.	85.	69.	90.
1301:	34.	34.	38.	34.	44.	44.	34.	44.	51.
1310:	108.	187.	417.	642.	755.	657.	322.	128.	49.
1319:	37.	45.	34.	43.	37.	47.	32.	35.	42.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	510.87	1073.	2639.	3.35	1022.15	1016	17	1.789F 00	7.4
2	1	558.90	28286.	1128.	1.91	1118.13	1108	31	4.714E 01	0.6
3	1	563.85	87109.	856.	1.90	1128.03	1108	31	1.452F 02	0.3
4	1	602.49	4851.	893.	1.90	1205.25	1194	19	8.084E 00	1.7
5	1	645.57	400.	572.	2.71	1291.34	1283	16	6.670E-01	9.8
6	1	656.85	2961.	581.	1.92	1313.89	1307	15	4.935E 00	2.2

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 \*\*\*\*\* 14 JAN 1980 9:10:59 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 11:46:00  
 SAMPLE IDENTIFICATION: 0222K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7218.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 SS INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1130:56 \* FWHM(1332) 2.390  
 PRESFT TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 658. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.7	8631.	1408.	0.0147	0.0014	9.8
Z-ANTIMONY	563.8	4015.	311495.	2.0910	0.0050	0.2
Z-ARSENIC	656.8	3230.	10960.	0.5664	0.0147	2.6

1009:	602.	611.	605.	588.	601.	640.	624.	606.	627.
1018:	650.	750.	794.	867.	803.	826.	771.	719.	630.
1027:	597.	601.	601.	581.	639.	550.	559.	574.	521.

1117:	21174.	26048.	22876.	13113.	5194.	2360.	2671.	6299.	16838.
1126:	37788.	63072.	76207.	65187.	34649.	11765.	2618.	917.	668.
1135:	568.	525.	486.	497.	470.	442.	433.	448.	494.

1301:	179.	191.	178.	176.	192.	196.	202.	196.	286.
1310:	423.	857.	1593.	2481.	2746.	2283.	1240.	531.	280.
1319:	192.	179.	152.	155.	171.	160.	171.	171.	209.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1.	1	510.67	1408.	8631.	2.79	1021.76	1015	14	2.347E 00	9.7
2	1	558.86	105234.	4593.	1.95	1118.05	1108	34	1.754E 02	0.3
3	1	563.82	311495.	4015.	1.93	1127.96	1108	34	5.192E 02	0.2
4	1	602.47	17513.	5359.	1.95	1205.21	1193	23	2.919E 01	1.0
5	1	645.64	1185.	2940.	2.25	1291.49	1283	16	1.975E 00	7.1
6	1	656.81	10960.	3230.	1.98	1313.81	1304	19	1.827E 01	1.2
7	1	665.09	744.	2155.	2.12	1330.35	1324	13	1.241E 00	9.6

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 \*\*\*\*\* 14 JAN 1980 9:12:12 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0222L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8711.000 UNITS: UG  
 SAMPLE GEOMETRY: AFRK1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1142:07 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGD	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.7	4293.	1431.	0.0125	0.0009	7.1
Z-ANTIMONY	563.8	1428.	132377.	0.7377	0.0023	0.3
Z-ARSENIC	656.8	1197.	4585.	0.1973	0.0058	2.9

1009:	254.	264.	247.	258.	222.	254.	283.	262.	261.
1018:	317.	348.	399.	479.	448.	467.	404.	337.	270.
1027:	266.	272.	233.	231.	243.	213.	233.	228.	233.
1117:	8589.	10962.	9823.	5666.	2232.	936.	1094.	2376.	6684.
1126:	15591.	26420.	32533.	27910.	15537.	4896.	1016.	243.	133.
1135:	154.	136.	133.	120.	150.	118.	116.	131.	171.
1301:	69.	82.	81.	75.	71.	58.	72.	88.	95.
1310:	146.	334.	673.	989.	1207.	957.	494.	242.	85.
1319:	58.	52.	74.	59.	70.	60.	63.	59.	58.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PW	CIS/SEC	%ERR
1.	1	510.73	1431.	4293.	2.83	1021.88	1013	18	2.386E 00	7.0
2.	1	558.89	44164.	1683.	1.94	1118.11	1107	36	7.361E 01	0.5
3.	1	563.84	132377.	1428.	1.93	1128.00	1107	36	2.206E 02	0.3
4.	1	602.48	7430.	1382.	1.93	1205.23	1195	18	1.238E 01	1.4
5.	1	645.63	529.	830.	2.00	1291.46	1286	14	8.817E-01	8.8
6.	1	656.83	4585.	1197.	1.93	1313.84	1306	19	7.642E 00	1.8
7.	1	665.30	261.	777.	1.74	1330.77	1326	12	4.351E-01	16.3

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 \*\*\*\*\* 14 JAN 1980 9:13:21 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q222M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9700.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 11JAN80 1152:45 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 628. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	3710.	1623.	0.0129	0.0008	6.0
%-ANTIMONY	563.8	1551.	152317.	0.7637	0.0023	0.3
%-ARSENIC	656.8	1169.	5005.	0.1943	0.0056	2.9

1009:	309.	289.	307.	288.	282.	319.	285.	256.	324.
1018:	347.	371.	466.	514.	581.	509.	430.	355.	344.
1027:	309.	281.	247.	272.	283.	255.	232.	217.	238.
1117:	9627.	12043.	10606.	6186.	2468.	1109.	1215.	2714.	7781.
1126:	18029.	30656.	37258.	31937.	17744.	5751.	1207.	296.	217.
1135:	204.	168.	143.	144.	142.	170.	143.	167.	151.
1301:	75.	83.	76.	74.	60.	88.	87.	96.	134.
1310:	159.	392.	747.	1105.	1278.	1033.	532.	237.	94.
1319:	79.	77.	69.	72.	67.	73.	56.	71.	73.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.76	1623.	3710.	2.69	1021.92	1016	14	2.705E 00	5.9
2	1	558.88	48485.	1881.	1.94	1118.09	1107	33	8.081E 01	0.5
3	1	563.83	152317.	1551.	1.93	1127.99	1107	33	2.539E 02	0.3
4	1	602.49	8381.	1715.	1.89	1205.25	1197	18	1.397E 01	1.3
5	1	645.65	730.	1104.	2.55	1291.51	1284	16	1.217E 00	7.4
6	1	656.80	5005.	1169.	1.96	1313.79	1305	17	8.342E 00	1.7
7	1	665.01	391.	721.	2.19	1330.20	1325	11	6.509E-01	11.0

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 \*\*\*\*\* 14 JAN 1980 9:14:32 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q222N  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9779.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCON  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1203:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 626. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	4902.	1496.	0.0119	0.0009	7.2
Z-ANTIMONY	563.8	1576.	143641.	0.7158	0.0022	0.3
Z-ARSENIC	656.8	1052.	4865.	0.1882	0.0054	2.9

1009:	294.	269.	274.	242.	256.	298.	293.	299.	321.
1018:	311.	359.	430.	491.	489.	465.	473.	353.	303.
1027:	316.	269.	268.	259.	257.	252.	266.	269.	244.
1117:	8974.	11416.	10049.	5743.	2364.	1040.	1115.	2578.	7163.
1126:	16877.	28531.	35509.	30426.	16845.	5316.	1197.	284.	179.
1135:	178.	147.	167.	131.	157.	150.	146.	136.	162.
1301:	66.	75.	78.	79.	75.	72.	75.	75.	112.
1310:	187.	377.	674.	1083.	1246.	993.	546.	224.	102.
1319:	67.	60.	62.	54.	62.	66.	64.	75.	66.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.87	1496.	4902.	2.87	1022.15	1012	19	2.493E 00	7.1
2	1	558.88	45269.	2118.	1.92	1118.09	1109	30	7.545E 01	0.5
3	1	563.84	143641.	1576.	1.92	1128.01	1109	30	2.394E 02	0.3
4	1	602.47	7937.	1776.	1.95	1205.20	1194	19	1.323E 01	1.4
5	1	645.51	621.	1084.	2.33	1291.23	1284	16	1.035E 00	8.5
6	1	656.82	4865.	1052.	1.96	1313.82	1306	16	8.109E 00	1.7
7	1	665.19	315.	971.	1.98	1330.55	1323	15	5.251E-01	15.1

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 \*\*\*\*\* 14 JAN 1980 9:15:41 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q2220  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9124.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1214:05 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 666. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	8934.	1582.	0.0136	0.0012	8.9
%-ANTIMONY	563.8	4662.	344329.	1.8426	0.0043	0.2
%-ARSENIC	656.8	3791.	12037.	0.5015	0.0130	2.6

1009:	709.	708.	749.	740.	685.	702.	694.	687.	712.
1018:	749.	826.	816.	1007.	928.	932.	822.	808.	736.
1027:	655.	683.	685.	657.	642.	695.	670.	675.	612.

1117:	22781.	27894.	24040.	14138.	5650.	2636.	3081.	6967.	19339.
1126:	42042.	70401.	84867.	70721.	38074.	12766.	3037.	1085.	736.
1135:	707.	676.	578.	586.	554.	562.	524.	580.	604.

1301:	206.	215.	201.	209.	227.	203.	237.	235.	305.
1310:	519.	948.	1830.	2681.	3055.	2388.	1433.	587.	291.
1319:	216.	218.	194.	190.	198.	190.	187.	190.	219.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1.	1	510.68	1582.	8934.	2.62	1021.76	1016	13	2.637E 00	8.8
2	1	558.85	112794.	5299.	1.97	1118.03	1108	33	1.880E 02	0.3
3	1	563.80	344329.	4662.	1.93	1127.94	1108	33	5.739E 02	0.2
4	1	602.46	18855.	5315.	1.97	1205.19	1195	18	3.142E 01	0.9
5	1	645.51	1332.	2643.	2.19	1291.22	1286	12	2.221E 00	6.1
6	1	656.80	12037.	3791.	2.01	1313.78	1304	19	2.006E 01	1.2
7	1	665.02	715.	2148.	2.00	1330.22	1325	11	1.191E 00	9.9

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 \*\*\*\*\* 14 JAN 1980 9:16:53 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q222P  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8006.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1225:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL : 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.7	2965.	1300.	0.0129	0.0009	6.6
Z-ANTIMONY	563.8	1238.	120220.	0.7346	0.0024	0.3
Z-ARSENIC	656.8	778.	4234.	0.2020	0.0059	2.9

1009:	215.	246.	220.	216.	245.	221.	220.	223.	249.
1018:	274.	297.	398.	385.	424.	423.	339.	312.	241.
1027:	234.	200.	206.	239.	189.	212.	209.	202.	203.
1117:	7714.	9641.	8686.	4985.	1927.	825.	876.	2157.	6092.
1126:	13768.	23940.	29962.	25586.	14019.	4528.	913.	211.	142.
1135:	120.	124.	107.	105.	95.	111.	128.	117.	114.
1301:	56.	65.	56.	43.	67.	57.	68.	66.	76.
1310:	145.	310.	566.	939.	1015.	870.	481.	194.	66.
1319:	59.	36.	48.	44.	56.	54.	52.	65.	51.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.75	1300.	2965.	2.82	1021.91	1015	14	2.166E 00	6.5
2	1	558.88	38975.	1559.	1.93	1118.10	1107	34	6.496E 01	0.5
3	1	563.84	120220.	1238.	1.91	1128.02	1107	34	2.004E 02	0.3
4	1	602.48	6726.	1287.	1.93	1205.24	1196	18	1.121E 01	1.4
5	1	645.55	508.	802.	2.06	1291.31	1284	14	8.462E-01	9.0
6	1	656.83	4234.	778.	2.00	1313.85	1304	17	7.057E 00	1.8
7	1	665.07	191.	690.	2.32	1330.32	1325	12	3.189E-01	20.7



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 \*\*\*\*\* 14 JAN 1980 9:18:01 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 02220  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8321.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1235:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	4828.	1109.	0.0107	0.0010	9.4
%-ANTIMONY	563.8	1615.	157669.	0.9287	0.0028	0.3
%-ARSENIC	656.9	1148.	5329.	0.2458	0.0070	2.8

1009:	312.	318.	277.	324.	295.	309.	321.	318.	305.
1018:	347.	391.	449.	496.	501.	475.	435.	338.	324.
1027:	295.	270.	318.	261.	255.	276.	273.	312.	254.
1117:	9983.	12663.	11202.	6430.	2660.	1122.	1214.	3013.	8080.
1126:	18548.	31440.	38908.	33361.	18102.	5955.	1209.	326.	203.
1135:	208.	179.	141.	179.	147.	170.	156.	162.	172.
1301:	85.	85.	83.	62.	74.	82.	75.	89.	119.
1310:	182.	378.	708.	1148.	1367.	1114.	633.	273.	121.
1319:	77.	65.	61.	73.	69.	52.	68.	77.	71.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.70	1109.	4828.	2.52	1021.81	1013	16	1.848E 00	9.4
2	1	558.88	51002.	1987.	1.94	1118.09	1107	35	8.500E 01	0.5
3	1	563.83	157669.	1615.	1.92	1128.00	1107	35	2.628E 02	0.3
4	1	602.48	8836.	2006.	1.96	1205.22	1195	21	1.473E 01	1.3
5	1	645.61	613.	1180.	2.23	1291.43	1284	16	1.021E 00	8.9
6	1	656.86	5329.	1148.	1.96	1313.90	1305	17	8.881E 00	1.6
7	1	664.97	304.	897.	2.16	1330.12	1325	13	5.064E-01	15.1



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 \*\*\*\*\* 14 JAN 1980 9:19:15 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q222R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8045.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1246:40 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 630. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 260079 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.8	5099.	1661.	0.0167	0.0011	6.6
Z-ANTIMONY	563.8	1836.	166620.	1.0170	0.0030	0.3
Z-ARSENIC	656.8	1490.	5737.	0.2750	0.0078	2.8

1009:	329.	343.	312.	304.	260.	304.	319.	342.	347.
1018:	388.	410.	424.	520.	499.	512.	444.	412.	379.
1027:	372.	321.	342.	298.	271.	295.	307.	298.	296.
1117:	10766.	13438.	11881.	7029.	2834.	1202.	1392.	3133.	8730.
1126:	19799.	33592.	40881.	35110.	18895.	6279.	1295.	334.	232.
1135:	200.	208.	174.	186.	148.	174.	196.	199.	198.
1301:	100.	88.	91.	72.	85.	89.	93.	88.	114.
1310:	177.	457.	847.	1283.	1419.	1132.	653.	266.	126.
1319:	78.	75.	90.	84.	66.	82.	59.	79.	102.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.78	1661.	5099.	3.46	1021.97	1013	18	2.768E 00	6.6
2	1	558.88	54671.	2118.	1.96	1118.09	1107	35	9.112E 01	0.4
3	1	563.83	166620.	1836.	1.93	1127.98	1107	35	2.777E 02	0.2
4	1	602.48	9481.	1768.	1.94	1205.23	1197	17	1.580E 01	1.2
5	1	645.60	759.	1617.	2.30	1291.41	1283	22	1.264E 00	8.3
6	1	656.80	5737.	1490.	2.00	1313.78	1305	20	9.562E 00	1.6
7	1	665.13	425.	817.	2.63	1330.44	1325	11	7.087E-01	10.7

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 \*\*\*\*\* 14 JAN 1980 9:20:24 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: 02225

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8163.000

UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 11JAN80 1257:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEY/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEY \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	3424.	1232.	0.0123	0.0009	7.4
%-ANTIMONY	563.8	1160.	118056.	0.7115	0.0024	0.3
%-ARSENIC	656.8	1121.	3861.	0.1832	0.0056	3.1

1009:

1018:	285.	322.	364.	414.	440.	421.	375.	328.	213.
1027:	234.	227.	211.	203.	209.	184.	220.	212.	206.

1117:	7465.	9513.	8437.	4743.	1948.	842.	966.	2187.	5940.
1126:	14002.	23325.	28758.	24953.	13803.	4414.	930.	223.	160.
1135:	127.	135.	105.	107.	109.	106.	113.	113.	113.

1301:	57.	54.	50.	58.	75.	56.	71.	62.	76.
1310:	117.	269.	608.	895.	998.	786.	432.	178.	82.
1319:	51.	57.	44.	44.	44.	56.	49.	42.	55.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.84	1232.	3424.	2.77	1022.08	1014	15	2.053E 00	7.3
2	1	558.88	38114.	1453.	1.93	1118.09	1108	32	6.352E 01	0.5
3	1	563.84	118056.	1160.	1.94	1128.01	1108	32	1.968E 02	0.3
4	1	602.48	6636.	1888.	1.88	1205.24	1194	25	1.106E 01	1.5
5	1	645.64	447.	798.	2.08	1291.48	1286	14	7.453E-01	10.1
6	1	656.79	3861.	1121.	1.91	1313.78	1306	19	6.436E 00	2.0
7	1	665.13	264.	488.	1.87	1330.44	1326	10	4.400E-01	13.3

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 \*\*\*\*\* 14 JAN 1980 9:21:33 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0222T  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8652.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1307:56 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
Z-COPPER	510.8	3222.	1731.	0.0165	0.0009	5.3
Z-ANTIMONY	563.8	1202.	110510.	0.6295	0.0021	0.3
Z-ARSENIC	656.8	918.	3760.	0.1691	0.0052	3.0

1009:	212.	209.	179.	186.	196.	235.	233.	201.	246.
1018:	264.	316.	398.	446.	426.	448.	388.	320.	235.
1027:	205.	200.	193.	219.	205.	220.	190.	170.	184.
1117:	7012.	8985.	7853.	4609.	1865.	780.	842.	1992.	5344.
1126:	12859.	22220.	27199.	23771.	12737.	4312.	851.	220.	124.
1135:	118.	99.	94.	110.	82.	107.	102.	108.	110.
1301:	47.	52.	59.	49.	49.	61.	61.	67.	79.
1310:	134.	275.	558.	748.	947.	787.	449.	166.	68.
1319:	55.	44.	46.	50.	47.	61.	43.	41.	52.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.76	1731.	3222.	3.12	1021.93	1012	17	2.884E 00	5.2
2	2	558.88	35807.	1547.	1.94	1118.10	1110	32	5.968E 01	0.6
3	2	563.84	110510.	1202.	1.91	1128.02	1110	32	1.842E 02	0.3
4	1	602.48	6227.	1183.	1.94	1205.23	1196	19	1.038E 01	1.5
5	1	645.65	397.	910.	2.07	1291.51	1283	17	6.611E-01	11.9
6	1	656.85	3760.	918.	2.02	1313.89	1304	18	6.267E 00	2.0
7	1	665.09	200.	624.	1.98	1330.35	1326	12	3.327E-01	19.1

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 \*\*\*\*\* 14 JAN 1980 9:22:42 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9945.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1318:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 638. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	6020.	1614.	0.0135	0.0010	7.3
%-ANTIMONY	563.8	2353.	199866.	0.9924	0.0027	0.3
%-ARSENIC	656.8	1857.	6594.	0.2592	0.0072	2.8

1009:	378.	350.	375.	364.	395.	384.	394.	405.	401.
1010:	496.	498.	522.	564.	614.	585.	558.	470.	451.
1027:	394.	356.	370.	356.	347.	377.	358.	359.	366.
1117:12770.	15832.	14175.	8191.	3251.	1447.	1626.	3882.	10444.	
1126:23791.	40251.	49330.	41634.	22903.	7477.	1619.	467.	301.	
1135:	288.	275.	280.	254.	211.	238.	221.	232.	240.
1301:	105.	126.	131.	104.	112.	127.	119.	117.	151.
1310:	271.	511.	916.	1449.	1661.	1424.	789.	315.	155.
1319:	108.	93.	104.	117.	99.	86.	98.	92.	118.

PULSE-PILF-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1.	1	510.79	1614.	6020.	3.49	1021.98	1014	16	2.690E 00	7.2
2	1	558.87	64189.	2829.	1.94	1118.08	1109	33	1.070E 02	0.4
3	1	563.83	199866.	2353.	1.93	1127.98	1109	33	3.331E 02	0.2
4	1	602.50	11395.	2503.	1.95	1205.26	1194	19	1.899E 01	1.1
5	1	645.67	742.	1590.	1.98	1291.54	1285	15	1.237E 00	8.4
6	1	656.85	6594.	1857.	1.99	1313.88	1305	17	1.099E 01	1.5
7	1	665.11	453.	1128.	2.07	1330.39	1325	12	7.558E-01	11.5

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 \*\*\*\*\* 14 JAN 1980 9:23:52 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6360.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1329:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	2633.	741.	0.0098	0.0010	10.5
%-ANTIMONY	563.9	876.	95051.	0.7394	0.0027	0.4
%-ARSENIC	656.8	845.	3196.	0.1974	0.0063	3.2

1009:	183.	156.	175.	171.	164.	184.	163.	201.	177.
1018:	201.	221.	251.	299.	320.	297.	249.	236.	213.
1027:	179.	155.	175.	180.	167.	149.	172.	155.	162.
1117:	5984.	7533.	6757.	3998.	1578.	640.	718.	1636.	4625.
1126:	10854.	18803.	23524.	20382.	11239.	3684.	699.	166.	106.
1135:	88.	95.	77.	76.	82.	85.	87.	80.	85.
1301:	38.	39.	54.	38.	50.	50.	51.	49.	62.
1310:	106.	247.	466.	676.	771.	671.	374.	135.	58.
1319:	39.	44.	54.	27.	41.	36.	39.	53.	48.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.85	741.	2633.	2.58	1022.10	1015	15	1.234E 00	10.5
2	2	558.89	30573.	1129.	1.94	1118.12	1107	33	5.096E 01	0.6
3	2	563.85	95051.	876.	1.91	1128.03	1107	33	1.584E 02	0.3
4	1	602.48	5271.	945.	1.94	1205.23	1195	18	8.784E 00	1.6
5	1	645.67	379.	581.	2.26	1291.55	1284	14	6.310E-01	10.4
6	1	656.84	3196.	845.	2.04	1313.86	1304	20	5.326E 00	2.2
7	1	664.77	180.	647.	2.36	1329.71	1324	14	3.005E-01	21.3

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:25:01 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: .6922.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1339:50 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	3312.	902.	0.0111	0.0011	9.7
%-ANTIMONY	563.9	993.	97262.	0.6965	0.0025	0.4
%-ARSENIC	656.9	675.	3293.	0.1877	0.0058	3.1

1009:	178.	181.	199.	178.	192.	206.	199.	189.	242.
1018:	204.	227.	291.	346.	313.	345.	286.	252.	223.
1027:	190.	172.	175.	184.	174.	171.	180.	169.	162.
1117:	5917.	7746.	7145.	4182.	1642.	693.	681.	1608.	4526.
1126:	10822.	19105.	24297.	21220.	11617.	3988.	807.	178.	110.
1135:	79.	82.	79.	94.	76.	82.	81.	94.	97.
1301:	56.	50.	42.	40.	48.	42.	53.	45.	76.
1310:	101.	210.	444.	742.	797.	699.	427.	157.	54.
1319:	34.	49.	41.	53.	50.	34.	36.	44.	62.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.85	902.	3312.	2.60	1022.12	1012	18	1.503E 00	9.6
2	2	558.92	31235.	1275.	1.92	1118.17	1108	34	5.206E 01	0.6
3	2	563.87	97262.	993.	1.89	1128.06	1108	34	1.621E 02	0.3
4	1	602.52	5699.	948.	1.93	1205.32	1198	16	9.498E 00	1.5
5	1	645.75	348.	608.	1.99	1291.70	1286	13	5.794E-01	11.4
6	1	656.87	3293.	675.	1.98	1313.93	1306	15	5.488E 00	2.1
7	1	664.95	251.	498.	2.53	1330.07	1325	12	4.177E-01	14.1

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 \*\*\*\*\* 14 JAN 1980 9:26:10 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q223D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7372.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1350:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	4413.	1077.	0.0125	0.0012	9.3
%-ANTIMONY	563.9	1854.	166878.	1.1241	0.0033	0.3
%-ARSENIC	656.9	1488.	5499.	0.2958	0.0084	2.9

1009:	332.	321.	328.	320.	312.	332.	326.	329.	336.
1018:	371.	409.	442.	488.	504.	478.	451.	361.	328.
1027:	333.	291.	312.	317.	331.	303.	275.	295.	327.
1117:	10732.	13845.	12437.	7522.	3043.	1218.	1268.	2630.	7585.
1126:	18306.	32391.	41235.	36614.	20637.	7207.	1487.	403.	269.
1135:	232.	198.	172.	144.	214.	180.	171.	179.	201.
1301:	86.	86.	76.	103.	92.	110.	94.	96.	119.
1310:	177.	355.	720.	1257.	1445.	1240.	695.	312.	110.
1319:	83.	92.	64.	87.	81.	74.	92.	82.	90.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.76	1077.	4413.	2.69	1021.92	1015	14	1.795E 00	9.2
2	2	558.92	55229.	2268.	1.92	1118.17	1108	32	9.205E 01	0.4
3	2	563.88	166878.	1854.	1.90	1128.09	1108	32	2.781E 02	0.2
4	1	602.52	9710.	2336.	1.90	1205.32	1194	21	1.618E 01	1.2
5	1	645.51	587.	1271.	1.89	1291.23	1284	13	9.790E-01	9.5
6	1	656.89	5499.	1488.	1.89	1313.97	1307	16	9.165E 00	1.7
7	1	665.01	403.	930.	2.29	1330.19	1324	12	6.714E-01	11.8



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 \*\*\*\*\* 14 JAN 1980 9:27:18 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6348.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCON  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1401:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 722. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	17486.	0. <	0.0084	NOT DETECTABLE	
%-ANTIMONY	563.8	10214.	603592.	4.7315	0.0096	0.2
%-ARSENIC	656.8	8547.	20462.	1.2846	0.0321	2.5

1009:	1371.	1341.	1346.	1381.	1267.	1369.	1337.	1340.	1335.
1018:	1313.	1441.	1370.	1397.	1479.	1427.	1289.	1295.	1278.
1027:	1318.	1204.	1295.	1314.	1219.	1246.	1254.	1218.	1244.
1117:	40005.	48605.	42584.	24708.	10681.	5108.	5804.	12632.	33305.
1126:	73603.	121956.	147715.	124541.	68827.	24759.	6647.	2977.	2258.
1135:	2044.	1851.	1663.	1596.	1573.	1475.	1475.	1413.	1412.
1301:	542.	568.	494.	510.	517.	531.	584.	526.	678.
1310:	972.	1739.	3214.	4707.	5312.	4426.	2598.	1173.	666.
1319:	543.	486.	491.	493.	508.	488.	502.	507.	523.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	558.85	197550.	10131.	1.97	1118.04	1107	34	3.293E 02	0.2
2	1	563.82	603592.	10214.	1.95	1127.96	1107	34	1.006E 03	0.1
3	1	602.46	35013.	12916.	1.95	1205.20	1197	17	5.836E 01	0.7
4	1	645.56	2247.	7079.	2.16	1291.32	1285	13	3.745E 00	5.7
5	1	656.82	20462.	8547.	2.00	1313.83	1305	17	3.410E 01	0.9
6	1	665.09	1106.	5043.	1.79	1330.36	1326	10	1.844E 00	9.6



\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:28:30 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7145.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1413:21 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	2392.	842.	0.0103	0.0009	9.0
%-ANTIMONY	563.9	920.	96219.	0.6715	0.0024	0.4
%-ARSENIC	656.9	798.	3265.	0.1830	0.0058	3.1

1009:	190.	188.	176.	192.	174.	195.	190.	189.	195.
1018:	200.	243.	288.	303.	319.	333.	282.	252.	182.
1027:	180.	175.	182.	170.	199.	160.	159.	140.	155.
1117:	5731.	7687.	7197.	4409.	1820.	691.	669.	1405.	4124.
1126:10099.	18385.	23737.	21420.	12414.	4369.	873.	191.	96.	
1135:	90.	86.	97.	96.	91.	79.	79.	99.	85.
1301:	49.	49.	42.	49.	41.	56.	47.	48.	69.
1310:	83.	192.	439.	675.	790.	699.	436.	168.	74.
1319:	45.	45.	40.	29.	35.	26.	32.	35.	41.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1.	1.	510.92	842.	2392.	2.74	1022.25	1016	13	1.403E 00	8.9
2.	2.	558.96	30861.	1249.	1.91	1118.26	1109	28	5.143E 01	0.6
3.	2.	563.91	96219.	920.	1.90	1128.14	1109	28	1.604E 02	0.3
4.	1.	602.58	5729.	1430.	1.89	1205.43	1196	22	9.548E 00	1.6
5.	1.	645.78	452.	741.	2.39	1291.77	1281	19	7.540E-01	9.7
6.	1.	656.91	3265.	798.	2.01	1314.01	1303	21	5.441E 00	2.1
7.	1.	665.05	240.	426.	2.20	1330.27	1325	12	4.004E-01	13.8

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 \*\*\*\*\* 14 JAN 1980 9:29:44 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5566.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1423:50 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIBJ  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 95.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	2048.	754.	0.0120	0.0011.	9.3
%-ANTIMONY	563.9	712.	75535.	0.6779	0.0027	0.4
%-ARSENIC	656.9	417.	2592.	0.1874	0.0061.	3.2

1009:	133.	134.	146.	137.	148.	154.	129.	152.	154.
1018:	169.	192.	218.	232.	264.	286.	213.	196.	163.
1027:	143.	157.	124.	139.	128.	129.	110.	134.	126.

1117:	4715.	5918.	5633.	3425.	1425.	526.	508.	1166.	3306.
1126:	8038.	14352.	18738.	16812.	9559.	3310.	727.	130.	69.
1135:	62.	62.	58.	71.	73.	55.	66.	72.	67.

1301:	38.	30.	20.	26.	33.	24.	36.	49.	41.
1310:	82.	141.	354.	534.	667.	524.	312.	130.	67.
1319:	40.	26.	26.	45.	42.	25.	30.	29.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.92	754.	2048.	2.65	1022.24	1015	15	1.257E 00	9.2
2	2	558.94	24452.	1056.	1.93	1118.21	1110	27	4.075E 01	0.7
3	2	563.90	75535.	712.	1.90	1128.13	1110	27	1.259E 02	0.4
4	1	602.55	4313.	1111.	1.89	1205.38	1198	19	7.188E 00	1.9
5	1	645.70	370.	500.	2.36	1291.61	1283	16	6.174E-01	10.0
6	1	656.87	2592.	417.	1.97	1313.93	1304	17	4.320E 00	2.3
7	1	665.39	206.	312.	2.18	1330.96	1326	10	3.431E-01	14.0

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:30:55 AM \*\*\*\*\*  
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91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223H  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7719.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1434:16 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.8	2480.	1234.	0.0142	0.0009	6.5
Z-ANTIMONY	563.9	834.	94239.	0.6110	0.0022	0.4
Z-ARSENIC	656.9	564.	3133.	0.1641	0.0051	3.1

1009:	179.	174.	182.	199.	197.	160.	153.	204.	193.
1018:	186.	270.	289.	330.	363.	326.	283.	240.	221.
1027:	172.	159.	181.	145.	162.	128.	148.	157.	140.
1117:	5502.	7274.	6687.	4139.	1664.	658.	657.	1465.	4115.
1126:	9945.	17975.	23428.	20747.	12143.	3996.	856.	179.	103.
1135:	88.	81.	89.	90.	55.	69.	70.	86.	87.
1301:	37.	52.	45.	49.	36.	51.	27.	47.	63.
1310:	89.	198.	411.	625.	821.	655.	414.	147.	67.
1319:	35.	36.	39.	32.	31.	33.	41.	35.	50.

PULSF-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	510.75	1234.	2480.	3.03	1021.92	1015	16	2.056E 00	6.4
2	2	558.94	29600.	991.	1.94	1118.21	1107	36	4.933E 01	0.6
3	2	563.90	94239.	834.	1.90	1128.13	1107	36	1.571E 02	0.3
4	1	571.88	96.	700.	1.90	1144.07	1142	9	1.600E-01	40.3
5	1	602.53	5656.	871.	1.87	1205.33	1196	17	9.427E 00	1.5
6	1	645.72	411.	483.	2.23	1291.64	1286	12	6.851E-01	9.0
7	1	656.91	3133.	564.	1.95	1314.00	1307	16	5.222E 00	2.1
8	1	664.93	191.	426.	2.50	1330.04	1324	12	3.187E-01	16.9

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:32:08 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223I  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6110.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1444:46 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 631. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	510.8	4832.	1050.	0.0155	0.0015	9.9
%-ANTIMONY	563.9	1696.	166254.	1.3643	0.0040	0.3
%-ARSENIC	656.9	1380.	5249.	0.3489	0.0100	2.9

1009:	332.	341.	309.	327.	318.	298.	319.	342.	315.
1018:	352.	360.	429.	469.	474.	480.	418.	373.	349.
1027:	279.	318.	298.	294.	278.	271.	283.	301.	285.

1117:10013.	13003.	12008.	7277.	2830.	1192.	1192.	2540.	7249.	
1126:17992.	31807.	41148.	36919.	21008.	7100.	1502.	368.	228.	
1135:	190.	198.	197.	186.	175.	180.	167.	189.	197.

1301:	76.	76.	95.	87.	69.	108.	83.	79.	111.
1310:	162.	310.	712.	1182.	1379.	1141.	702.	285.	99.
1319:	85.	72.	67.	84.	70.	71.	89.	71.	80.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.82	1050.	4832.	2.74	1022.06	1014	16	1.751E 00	9.9
2	2	558.93	52844.	2029.	1.93	1118.19	1107	35	8.807E 01	0.5
3	2	563.90	166254.	1696.	1.90	1128.12	1107	35	2.771E 02	0.2
4	1	602.56	9756.	2478.	1.89	1205.39	1195	23	1.626E 01	1.2
5	1	645.72	651.	1296.	1.97	1291.65	1282	16	1.085E 00	8.7
6	1	656.89	5249.	1380.	1.90	1313.97	1307	16	8.749E 00	1.7
7	1	665.26	306.	875.	1.98	1330.69	1326	11	5.098E-01	14.8

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:33:17 AM \*\*\*\*\*  
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91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q223J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7710.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1455:29 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY: NUCL. LIB1  
 DATE CALIBRATED: 260079 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.7	2674.	1169.	0.0138	0.0010	7.0
Z-ANTIMONY	563.9	908.	99423.	0.6478	0.0023	0.4
Z-ARSENIC	656.9	922.	3335.	0.1765	0.0056	3.2

1009:	182.	191.	194.	204.	202.	185.	189.	198.	206.
1010:	257.	250.	295.	384.	355.	366.	296.	244.	223.
1027:	204.	181.	170.	169.	175.	180.	170.	152.	180.
1117:	6185.	8036.	7478.	4505.	1847.	728.	703.	1504.	4223.
1126:	10554.	18854.	24661.	22156.	12724.	4302.	885.	171.	121.
1135:	90.	106.	99.	87.	100.	89.	104.	90.	94.
1301:	55.	45.	51.	51.	40.	49.	41.	61.	65.
1310:	98.	220.	472.	726.	814.	741.	414.	156.	72.
1319:	40.	53.	46.	52.	37.	55.	38.	45.	47.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.71	1169.	2674.	2.84	1021.83	1015	15	1.949E 00	6.9
2	2	558.94	32421.	1203.	1.91	1118.22	1107	29	5.403E 01	0.6
3	2	563.90	99423.	908.	1.89	1128.14	1107	29	1.657E 02	0.3
4	1	602.56	5882.	915.	1.87	1205.39	1198	15	9.804E 00	1.5
5	1	645.78	436.	708.	2.38	1291.77	1284	16	7.270E-01	9.9
6	1	656.88	3335.	922.	1.97	1313.94	1303	19	5.558E 00	2.2
7	1	665.29	190.	720.	1.90	1330.76	1324	15	3.171E-01	21.2

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:34:24 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5883.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 5S INCOR  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1505:59 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 721. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	511.0	17309.	0. <	0.0096	NOT DETECTABLE	
%-ANTIMONY	563.8	10594.	610256.	5.2215	0.0105	0.2
%-ARSENIC	656.8	9135.	19630.	1.3682	0.0344	2.5

1009: 1332.	1299.	1431.	1325.	1326.	1286.	1248.	1320.	1341.
1018: 1313.	1347.	1294.	1438.	1444.	1358.	1332.	1310.	1278.
1027: 1263.	1271.	1237.	1266.	1227.	1247.	1217.	1211.	1242.
1117:38757.	47862.	41650.	24140.	10322.	5127.	5754.	12852.	33488.
1126:74605.	123998.	149202.	125854.	69335.	24870.	6767.	2974.	2339.
1135: 1984.	1870.	1630.	1549.	1552.	1545.	1446.	1416.	1401.
1301: 492.	547.	517.	517.	513.	514.	596.	553.	711.
1310: 958.	1690.	3028.	4592.	5185.	4253.	2548.	1148.	683.
1319: 536.	540.	495.	506.	494.	484.	485.	476.	473.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	558.86	192409.	10398.	1.96	1118.05	1107	33	3.207E 02	0.2
2	1	563.81	610256.	10594.	1.95	1127.96	1107	33	1.017E 03	0.1
3	1	602.47	34491.	13010.	1.94	1205.22	1197	18	5.748E 01	0.7
4	1	645.54	2116.	7735.	1.92	1291.28	1284	14	3.526E 00	6.3
5	1	656.83	19630.	9135.	1.98	1313.84	1305	18	3.272E 01	1.0
6	1	665.16	1052.	4830.	1.67	1330.50	1326	10	1.754E 00	9.8

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:35:24 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q223L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6120.000 UNITS: UG  
 SAMPLE GEOMETRY: APPR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.1ABJ

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1518:13 \* FWHM(1332) 2.390  
 PRESFT TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 601. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 2600179 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGD	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	63.	0.	< 6.0040E-04	NOT DETECTABLE	
%-ANTIMONY	564.1	32.	0.	< 2.3911E-04	NOT DETECTABLE	
%-ARSENIC	657.4	23.	0.	< 0.0017	NOT DETECTABLE	
1009:	2.	3.	1.	2.	4.	5.
1018:	4.	4.	7.	5.	7.	6.
1027:	1.	1.	4.	3.	1.	0.
1117:	0.	5.	2.	2.	3.	4.
1126:	3.	0.	6.	1.	6.	1.
1135:	2.	4.	2.	3.	4.	3.
1301:	2.	3.	2.	1.	4.	5.
1310:	0.	3.	4.	2.	1.	2.
1319:	2.	2.	0.	5.	3.	4.

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 \*\*\*\*\* 14 JAN 1980 9:36:29 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5611.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCCR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1528:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 614. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 2600179 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	2408.	806.	0.0134	0.0013	9.4
%-ANTIMONY	563.9	699.	74421.	0.6702	0.0027	0.4
%-ARSENIC	656.9	563.	2425.	0.1789	0.0060	3.4

1009:	152.	135.	133.	138.	139.	139.	149.	154.	143.
1018:	164.	211.	217.	261.	269.	261.	205.	187.	171.
1027:	142.	133.	137.	127.	133.	127.	138.	141.	139.

1117:	4302.	5648.	5384.	3245.	1304.	490.	528.	1084.	3123.
1126:	7757.	14181.	18376.	16912.	9546.	3207.	675.	120.	84.
1135:	58.	68.	70.	52.	81.	63.	68.	83.	84.

1301:	32.	32.	45.	37.	35.	41.	36.	39.	47.
1310:	64.	131.	323.	495.	608.	546.	318.	142.	50.
1319:	39.	27.	30.	27.	26.	29.	29.	32.	43.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.72	806.	2408.	2.84	1021.86	1012	18	1.343E 00	9.3
2	2	558.95	23027.	892.	1.92	1118.24	1107	34	3.838E 01	0.7
3	2	563.91	74421.	699.	1.89	1128.15	1107	34	1.240E 02	0.4
4	1	602.60	4535.	765.	1.95	1205.46	1197	18	7.559E 00	1.7
5	1	645.66	331.	648.	2.30	1291.53	1280	18	5.514E-01	12.2
6	1	656.93	2425.	563.	1.95	1314.05	1305	18	4.041E 00	2.5
7	1	664.76	171.	380.	2.27	1329.70	1324	13	2.851E-01	17.8



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 \*\*\*\*\* 14 JAN 1980 9:37:39 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223N  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6722.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRJ 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1538:55 \* FWHM(1332) 2.390  
 PRESFT TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 645. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	6191.	1260.	0.0177	0.0017	9.3
Z-ANTIMONY	563.9	2730.	243364.	1.8328	0.0047	0.3
Z-ARSENIC	656.9	2061.	8023.	0.4964	0.0133	2.7

1009:	467.	454.	450.	464.	458.	451.	490.	443.	443.
1018:	507.	528.	594.	537.	663.	602.	580.	542.	519.
1027:	455.	443.	426.	410.	429.	410.	419.	453.	442.

1117:	14615.	19082.	17532.	10558.	4238.	1724.	1834.	3827.	10756.
1126:	26310.	47440.	60337.	53784.	30409.	10514.	2293.	601.	425.
1135:	364.	354.	326.	290.	319.	322.	329.	322.	339.

1301:	125.	137.	129.	130.	114.	124.	133.	150.	164.
1310:	261.	499.	1108.	1688.	2019.	1831.	1019.	355.	182.
1319:	119.	112.	114.	116.	130.	139.	112.	126.	131.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.97	1260.	6191.	3.17	1022.35	1016	14	2.101E 00	9.3
2	2	558.93	76947.	3091.	1.93	1118.19	1107	34	1.282E 02	0.4
3	2	563.89	243364.	2730.	1.90	1128.10	1107	34	4.056E 02	0.2
4	1	602.53	14242.	3146.	1.85	1205.33	1195	18	2.374E 01	1.0
5	1	645.78	869.	1953.	1.98	1291.76	1285	14	1.448E 00	8.0
6	1	656.90	8023.	2061.	1.95	1313.99	1304	17	1.337E 01	1.4
7	1	665.22	380.	1356.	1.72	1330.62	1326	11	6.339E-01	14.6

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 \*\*\*\*\* 14 JAN 1980 9:38:51 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 02230  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6078.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1549:53 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER	510.7	2408.	612.	0.0096	0.0012	12.1
X-ANTIMONY	563.9	730.	88702.	0.7402	0.0028	0.4
X-ARSENIC	657.0	655.	2719.	0.1869	0.0061	3.3

1009:	161.	163.	163.	161.	166.	162.	154.	175.	170.
1018:	194.	204.	231.	256.	279.	258.	231.	186.	182.
1027:	162.	159.	147.	179.	139.	133.	152.	173.	173.

1117:	4896.	6534.	6205.	3669.	1488.	629.	593.	1227.	3600.
1126:	9243.	16726.	22117.	19898.	11566.	4017.	848.	164.	95.
1135:	85.	75.	65.	66.	62.	71.	59.	69.	89.

1301:	42.	38.	50.	51.	38.	49.	49.	47.	50.
1310:	81.	143.	344.	537.	672.	670.	364.	141.	54.
1319:	40.	28.	31.	34.	39.	27.	33.	41.	40.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.71	612.	2408.	2.62	1021.83	1015	15	1.020E 00	12.0
2	2	558.96	26324.	960.	1.90	1118.25	1107	33	4.387E 01	0.6
3	2	563.91	88702.	730.	1.89	1128.16	1107	33	1.478E 02	0.3
4	1	602.58	5197.	1880.	1.85	1205.42	1197	32	8.661E 00	1.8
5	1	645.68	379.	511.	2.25	1291.56	1286	14	6.317E-01	9.9
6	1	656.98	2719.	655.	1.92	1314.15	1305	17	4.531E 00	2.3
7	1	665.71	326.	616.	4.39	1331.60	1322	16	5.431E-01	12.1

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 \*\*\*\*\* 14 JAN 1980 9:40:02 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: 0223P

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8155.000

UNITS: UG

SAMPLE GEOMETRY: AFFR1 5S INCOR

EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 11JAN80 1600:24 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

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DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	4012.	1032.	0.0122	0.0011	9.3
%-ANTIMONY	563.9	1519.	134120.	0.8357	0.0026	0.3
%-ARSENIC	656.9	825.	4296.	0.2212	0.0065	2.9

1009:	267.	225.	230.	229.	242.	256.	255.	301.	247.
1018:	275.	334.	360.	417.	420.	383.	364.	299.	264.
1027:	240.	227.	258.	230.	228.	228.	209.	221.	199.
1117:	7828.	10048.	9363.	5836.	2395.	1011.	937.	1961.	5637.
1126:	13723.	25670.	33461.	30244.	17456.	6063.	1276.	294.	179.
1135:	163.	126.	125.	132.	124.	125.	130.	129.	136.
1301:	64.	48.	68.	73.	67.	67.	60.	66.	75.
1310:	138.	279.	518.	900.	1049.	992.	538.	253.	84.
1319:	43.	67.	51.	42.	61.	49.	60.	67.	55.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.68	1032.	4012.	2.64	1021.77	1012	17	1.720E 00	9.2
2	2	558.95	40492.	1973.	1.91	1118.24	1110	32	6.749E 01	0.5
3	2	563.91	134120.	1519.	1.88	1128.16	1110	32	2.235E 02	0.3
4	1	602.58	7768.	1386.	1.89	1205.43	1197	17	1.295E 01	1.3
5	1	645.67	490.	897.	1.81	1291.55	1286	13	8.172E-01	9.7
6	1	656.93	4296.	825.	1.97	1314.06	1307	15	7.160E 00	1.8
7	1	665.32	429.	932.	2.84	1330.81	1322	18	7.153E-01	11.2

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 \*\*\*\*\* 14 JAN 1980 9:41:12 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: 02230

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 5228.000

UNITS: UG

SAMPLE GEOMETRY: AFFRI SS INCOR

EFFICIENCY FILE NAME: EFF.TAB1

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ACQUISITION DATE: 11JAN80 1611:02 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 95.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER	510.8	2032.	709.	0.00132	0.0013	9.8
X-ANTIMONY	563.9	654.	74000.	0.7206	0.0029	0.4
X-ARSENIC	656.9	585.	2421.	0.1953	0.0066	3.4

1009:	136.	136.	143.	135.	144.	133.	124.	136.	167.
1018:	152.	182.	191.	248.	226.	235.	211.	179.	167.
1027:	129.	134.	110.	137.	114.	136.	126.	135.	134.
1117:	4275.	5692.	5195.	3299.	1328.	540.	526.	1040.	2899.
1126:	7257.	13972.	18641.	16946.	9666.	3487.	743.	135.	85.
1135:	67.	61.	50.	69.	59.	57.	58.	60.	65.
1301:	30.	39.	30.	28.	26.	30.	40.	48.	46.
1310:	67.	159.	303.	493.	620.	528.	318.	123.	46.
1319:	24.	23.	26.	36.	19.	33.	30.	29.	32.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.85	709.	2032.	2.93	1022.11	1015	16	1.182E 00	9.7
2	2	558.96	22774.	849.	1.91	1118.25	1107	32	3.796E 01	0.7
3	2	563.93	74000.	654.	1.86	1128.19	1107	32	1.233E 02	0.4
4	1	602.57	4313.	855.	1.89	1205.42	1196	19	7.188E 00	1.8
5	1	645.72	294.	480.	1.94	1291.64	1285	15	4.903E-01	12.0
6	1	656.92	2421.	585.	1.96	1314.02	1305	20	4.035E 00	2.5
7	1	665.41	150.	357.	1.96	1330.99	1325	12	2.492E-01	19.7

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 \*\*\*\*\* 14 JAN 1980 9:42:23 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0223R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6434.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 11JAN80 1621:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 260C179 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.6	2509.	933.	0.0142	0.0012	8.3
Z-ANTIMONY	563.9	825.	97728.	0.7747	0.0028	0.4
Z-ARSENIC	656.9	717.	3241.	0.2134	0.0067	3.1

1009:	183.	184.	192.	191.	156.	149.	188.	214.	180.
1018:	218.	268.	271.	296.	313.	289.	274.	209.	190.
1027:	181.	174.	190.	166.	168.	143.	164.	145.	168.
1117:	5424.	7262.	6821.	4368.	1835.	599.	666.	1437.	4038.
1126:	9851.	18326.	24560.	22110.	12778.	4433.	852.	187.	112.
1135:	103.	95.	78.	83.	69.	91.	83.	80.	87.
1301:	43.	51.	42.	39.	48.	45.	53.	47.	63.
1310:	81.	208.	404.	658.	834.	740.	376.	181.	91.
1319:	46.	48.	38.	30.	40.	33.	36.	51.	49.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.56	933.	2509.	3.15	1021.52	1014	15	1.555E 00	8.3
2	2	558.98	29548.	1055.	1.92	1118.29	1107	33	4.925E 01	0.6
3	2	563.92	97728.	825.	1.88	1128.17	1107	33	1.629E 02	0.3
4	1	602.57	5635.	1097.	1.92	1205.42	1195	21	9.392E 00	1.6
5	1	645.64	415.	664.	2.24	1291.48	1285	15	6.917E-01	10.1
6	1	656.92	3241.	717.	1.93	1314.03	1304	19	5.401E 00	2.1
7	1	665.40	327.	656.	2.90	1330.98	1323	21	5.453E-01	12.4

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 \*\*\*\*\* 14 JAN 1980 9:43:38 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q2235  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5488.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.1AB1

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 \*  
 ACQUISITION DATE: 11JAN80 1631:57 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
Z-COPPER	510.8	2231.	629.	0.0114	0.0013	11.4
Z-ANTIMONY	563.9	709.	82860.	0.7715	0.0030	0.4
Z-ARSENIC	656.9	223.	2686.	0.2083	0.0065	3.1

1009:	151.	164.	156.	143.	135.	161.	148.	156.	157.
1018:	172.	201.	216.	243.	261.	234.	224.	195.	179.
1027:	141.	121.	155.	131.	149.	136.	159.	127.	131.
1117:	4579.	6171.	5826.	3487.	1460.	582.	549.	1188.	3338.
1126:	8323.	15510.	20592.	18752.	11036.	3699.	780.	137.	83.
1135:	64.	69.	72.	58.	64.	52.	72.	58.	77.
1301:	35.	28.	37.	37.	37.	34.	39.	51.	60.
1310:	93.	161.	334.	537.	659.	611.	345.	145.	50.
1319:	45.	44.	36.	30.	28.	33.	36.	45.	38.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.85	629.	2231.	2.87	1022.10	1015	15	1.048E 00	11.3
2	2	558.96	24814.	930.	1.90	1118.25	1107	34	4.136E 01	0.7
3	2	563.93	82860.	709.	1.88	1128.18	1107	34	1.381E 02	0.4
4	1	602.59	4941.	930.	1.90	1205.45	1195	22	8.235E 00	1.7
5	1	645.66	330.	462.	1.92	1291.52	1286	12	5.492E-01	10.7
6	4	656.94	2686.	223.	1.99	1314.06	1303	34	4.477E 00	2.1
7	4	665.45	225.	309.	2.69	1331.07	1303	34	3.749E-01	12.9

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 \*\*\*\*\* 14 JAN 1980 9:44:54 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: Q223T

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 6464.000 UNITS: UG

SAMPLE GEOMETRY: AFFRI 55 INCOR

EFFICIENCY FILE NAME: EFF.TAB1.

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ACQUISITION DATE: 11JAN80 1642:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.

\*\*\*\*\*

DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.6	2532.	777.	0.0120	0.0012	9.9
Z-ANTIMONY	563.9	857.	89114.	0.7058	0.0026	0.4
Z-ARSENIC	657.0	711.	2837.	0.1877	0.0061	3.3

1009:	160.	164.	177.	164.	169.	169.	174.	169.	173.
1010:	181.	241.	255.	269.	282.	272.	220.	212.	178.
1027:	171.	150.	152.	143.	156.	142.	139.	158.	157.

1117:	5076.	7107.	6610.	4013.	1613.	642.	577.	1202.	3599.
1126:	9095.	16719.	22387.	20056.	11878.	4036.	876.	165.	80.
1135:	82.	73.	73.	82.	73.	67.	78.	81.	78.

1301:	42.	36.	45.	46.	46.	45.	37.	61.	59.
1310:	93.	190.	334.	557.	712.	645.	401.	154.	72.
1319:	37.	33.	34.	38.	28.	30.	40.	29.	48.

PULSF-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.64	777.	2532.	2.99	1021.70	1014	16	1.295E 00	9.8
2	2	558.97	27922.	1079.	1.87	1118.28	1108	34	4.654E 01	0.6
3	2	563.92	89114.	857.	1.88	1128.18	1108	34	1.485E 02	0.3
4	1	602.60	5389.	893.	1.86	1205.47	1195	19	8.982E 00	1.6
5	1	645.94	388.	825.	2.21	1292.08	1280	20	6.461E-01	11.6
6	1	656.97	2837.	711.	1.99	1314.12	1305	18	4.728E 00	2.3
7	1	665.22	267.	476.	2.40	1330.62	1324	14	4.446E-01	13.1



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 \*\*\*\*\* 14 JAN 1980 9:46:04 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224A  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 4863.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 11JAN80 1652:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 698. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	13905.	0. <	0.0115	NOT DETECTABLE	
%-ANTIMONY	563.9	7871.	513703.	5.4187	0.0114	0.2
%-ARSENIC	656.9	7119.	16716.	1.4771	0.0375	2.5

1009: 1035.	1068.	1086.	1118.	1048.	1080.	1032.	1050.	1072.
1018: 1097.	1086.	1118.	1146.	1145.	1104.	1093.	1007.	1023.
1027: 973.	991.	1003.	974.	961.	989.	1002.	1036.	947.

1117:31487.	40577.	36197.	21468.	8989.	4138.	4305.	9099.	24418.
1126:57617.	101069.	128293.	111348.	62549.	21668.	5694.	2175.	1662.
1135: 1399.	1312.	1174.	1166.	1097.	1058.	1066.	1003.	1001.

1301: 394.	435.	413.	391.	401.	405.	403.	423.	487.
1310: 704.	1302.	2348.	3778.	4436.	3757.	2314.	994.	492.
1319: 398.	357.	336.	348.	364.	412.	353.	339.	362.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	558.90	160826.	8156.	1.92	1118.15	1107	33	2.680E 02	0.3
2	2	563.87	513703.	7871.	1.90	1128.06	1107	33	8.562E 02	0.1
3	1	602.51	27189.	9597.	1.87	1205.30	1196	17	4.532E 01	0.8
4	1	638.20	384.	4587.	2.05	1276.62	1273	11	6.408E-01	25.4
5	1	645.68	1854.	5226.	2.02	1291.56	1285	13	3.090E 00	6.0
6	1	656.89	16716.	7119.	1.95	1313.96	1306	18	2.786E 01	1.1
7	1	665.21	1194.	3770.	2.48	1330.58	1326	11	1.989E 00	7.8



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 \*\*\*\*\* 14 JAN 1980 9:47:18 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q224B  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8218.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1704:48 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 629. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.6	4272.	1190.	0.0148	0.0012	8.4
%-ANTIMONY	564.0	1591.	158616.	0.9920	0.0029	0.3
%-ARSENIC	657.0	1316.	4858.	0.2553	0.0074	2.9

1009:	305.	291.	287.	282.	256.	297.	320.	305.	303.
1018:	320.	353.	442.	454.	439.	434.	404.	336.	300.
1027:	305.	262.	268.	286.	289.	278.	261.	304.	215.
1117:	8617.	12205.	11854.	7371.	3026.	1180.	1008.	2035.	5812.
1126:	15084.	28951.	39799.	36959.	21988.	7862.	1638.	352.	210.
1135:	170.	184.	168.	177.	144.	157.	152.	180.	168.
1301:	78.	63.	82.	80.	84.	91.	78.	63.	86.
1310:	125.	272.	587.	1015.	1340.	1104.	712.	300.	125.
1319:	71.	76.	87.	67.	78.	80.	69.	62.	63.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	510.64	1190.	4272.	2.89	1021.69	1013	16	1.984E 00	8.3
2	2	559.01	48815.	1909.	1.88	1118.35	1107	35	8.136E 01	0.5
3	2	563.96	158616.	1591.	1.86	1128.25	1107	35	2.644E 02	0.3
4	1	602.62	8902.	1945.	1.88	1205.51	1195	20	1.484E 01	1.3
5	1	645.69	607.	1168.	2.00	1291.58	1283	16	1.012E 00	8.9
6	1	656.97	4858.	1316.	1.86	1314.12	1306	16	8.097E 00	1.8
7	1	665.41	264.	1272.	1.97	1330.99	1323	16	4.401E-01	20.1

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 \*\*\*\*\* 14 JAN 1980 9:48:28 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224C  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8397.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1715:31 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 656. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGD	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
X-COPPER	510.9	8554.	1324.	0.0163	0.0017	10.3
X-ANTIMONY	564.0	3643.	299361.	1.8360	0.0044	0.2
X-ARSENIC	657.0	2569.	9580.	0.4951	0.0130	2.6

1009:	574.	585.	601.	564.	580.	555.	615.	612.	602.
1018:	643.	658.	707.	762.	753.	739.	761.	649.	605.
1027:	585.	573.	573.	564.	552.	530.	561.	534.	526.
1117:16795.	23443.	22554.	14123.	5806.	2367.	2039.	4056.	11315.	
1126:28966.	55042.	74988.	69452.	41260.	14727.	3462.	963.	655.	
1135:	556.	487.	483.	454.	455.	381.	434.	428.	466.
1301:	203.	197.	181.	211.	161.	188.	173.	181.	205.
1310:	306.	606.	1187.	1963.	2493.	2252.	1400.	589.	287.
1319:	169.	169.	165.	159.	161.	167.	142.	144.	182.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGD	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.86	1324.	8554.	3.17	1022.13	1014	15	2.207E 00	10.3
2	2	558.99	94007.	4107.	1.89	1118.32	1107	35	1.567E 02	0.3
3	2	563.95	299361.	3643.	1.87	1128.23	1107	35	4.989E 02	0.2
4	1	602.63	17302.	3974.	1.87	1205.53	1196	17	2.884E 01	0.9
5	1	645.77	1217.	2573.	2.05	1291.75	1285	14	2.029E 00	6.6
6	1	656.97	9580.	2569.	1.94	1314.13	1307	15	1.597E 01	1.3
7	1	665.19	590.	1986.	1.99	1330.55	1326	12	9.841E-01	11.4

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 \*\*\*\*\* 14 JAN 1980 9:49:41 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7322.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1726:41 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	2486.	937.	0.0133	0.0011	8.3
%-ANTIMONY	564.0	944.	96651.	0.6811	0.0024	0.4
%-ARSENIC	657.0	727.	3146.	0.1873	0.0059	3.2

1009:	182.	196.	197.	168.	202.	168.	170.	162.	186.
1018:	204.	238.	271.	305.	319.	320.	262.	230.	217.
1027:	184.	189.	174.	151.	177.	168.	190.	147.	153.
1117:	5335.	7449.	7270.	4634.	1825.	742.	644.	1145.	3520.
1126:	8986.	17207.	24234.	22781.	13652.	4893.	977.	174.	95.
1135:	92.	99.	89.	86.	86.	82.	87.	78.	93.
1301:	46.	37.	36.	45.	41.	53.	51.	51.	51.
1310:	92.	178.	376.	616.	717.	761.	437.	179.	79.
1319:	42.	38.	37.	43.	37.	45.	33.	44.	33.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.84	937.	2486.	2.87	1022.09	1015	15	1.562E 00	8.2
2	2	559.01	29918.	1216.	1.87	1118.36	1108	34	4.986E 01	0.6
3	2	563.97	96651.	944.	1.85	1128.28	1108	34	1.611E 02	0.3
4	1	602.65	5856.	2460.	1.83	1205.58	1194	41	9.760E 00	1.8
5	1	645.67	440.	549.	2.22	1291.55	1286	12	7.333E-01	8.9
6	1	657.00	3146.	727.	2.01	1314.18	1303	19	5.243E 00	2.2
7	1	665.29	148.	662.	2.28	1330.75	1324	14	2.469E-01	25.9

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 \*\*\*\*\* 14 JAN 1980 9:50:57 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7770.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1737:11 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 619. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.7	3073.	913.	0.0124	0.0011	9.3
Z-ANTIMONY	564.0	936.	105845.	0.7042	0.0024	0.3
Z-ARSENIC	657.0	926.	3230.	0.1821	0.0058	3.2

1009:	184.	187.	193.	185.	187.	184.	205.	180.	221.
1010:	223.	256.	307.	287.	361.	326.	280.	241.	190.
1027:	205.	206.	179.	166.	186.	167.	177.	174.	185.

1117:	5740.	8053.	7682.	4752.	1969.	753.	697.	1375.	3830.
1126:	9632.	19108.	26885.	24978.	14802.	5121.	1072.	238.	118.
1135:	107.	88.	80.	91.	90.	98.	112.	106.	89.

1301:	41.	43.	54.	56.	34.	51.	63.	52.	54.
1310:	75.	194.	349.	656.	823.	802.	466.	183.	76.
1319:	41.	42.	42.	53.	32.	54.	47.	47.	45.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1.	1	510.72	913.	3073.	2.61	1021.85	1014	17	1.521E 00	9.2
2	2	559.00	31980.	1178.	1.87	1118.33	1107	33	5.330E 01	0.6
3	2	563.97	105845.	936.	1.84	1128.26	1107	33	1.764E 02	0.3
4	1	602.63	6140.	1188.	1.89	1205.52	1194	22	1.023E 01	1.5
5	1	645.95	387.	878.	1.86	1292.10	1280	18	6.450E-01	12.0
6	1	657.01	3230.	926.	1.88	1314.20	1304	19	5.383E 00	2.2
7	1	665.36	193.	585.	2.07	1330.89	1326	12	3.215E-01	19.1

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 \*\*\*\*\* 14 JAN 1980 9:52:09 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q224F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8343.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1747:41 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.8	3956.	1146.	0.0146	0.0012	8.4
Z-ANTIMONY	564.0	1245.	133969.	0.8316	0.0026	0.3
Z-ARSENIC	657.0	1029.	4144.	0.2186	0.0065	3.0

1009:	280.	260.	232.	233.	261.	251.	247.	251.	277.
1018:	277.	305.	353.	388.	416.	380.	359.	287.	267.
1027:	236.	242.	197.	217.	219.	231.	224.	213.	202.
1117:	7318.	10048.	9853.	6026.	2439.	924.	830.	1755.	4800.
1126:	12456.	24230.	33904.	31585.	18623.	6397.	1300.	302.	158.
1135:	130.	123.	147.	127.	135.	118.	138.	138.	143.
1301:	62.	70.	57.	64.	55.	58.	76.	86.	77.
1310:	113.	223.	450.	847.	1035.	1022.	612.	250.	98.
1319:	80.	51.	58.	65.	53.	56.	55.	44.	70.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	510.80	1146.	3956.	2.86	1022.02	1012	18	1.910E 00	8.3
2	2	559.00	40451.	1599.	1.87	1118.33	1107	30	6.742E 01	0.5
3	2	563.96	133969.	1245.	1.84	1128.26	1107	30	2.233E 02	0.3
4	1	602.62	8032.	1554.	1.90	1205.51	1194	21	1.339E 01	1.3
5	1	645.71	547.	1150.	2.24	1291.63	1283	19	9.121E-01	9.7
6	1	657.01	4144.	1029.	1.90	1314.21	1305	17	6.907E 00	1.9
7	1	665.64	354.	748.	4.08	1331.45	1325	13	5.903E-01	12.1

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 \*\*\*\*\* 14 JAN 1980 9:53:20 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q224G  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7065.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1758:19 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	2564.	974.	0.0148	0.0012	8.1
%-ANTIMONY	564.0	874.	100323.	0.7368	0.0026	0.4
%-ARSENIC	657.0	548.	3048.	0.1907	0.0060	3.1

1009:	173.	169.	197.	175.	191.	166.	145.	191.	189.
1018:	210.	247.	253.	283.	294.	323.	260.	238.	186.
1027:	221.	190.	167.	157.	173.	155.	165.	156.	156.

1117:	5218.	7316.	7165.	4401.	1773.	706.	603.	1294.	3559.
1126:	9237.	18148.	25253.	23912.	13962.	4889.	1030.	193.	107.
1135:	87.	96.	80.	74.	79.	84.	79.	79.	77.

1301:	38.	45.	46.	45.	38.	40.	39.	48.	61.
1310:	87.	152.	338.	579.	787.	702.	456.	159.	67.
1319:	41.	39.	29.	30.	38.	35.	37.	33.	34.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.80	974.	2564.	3.15	1022.02	1015	16	1.624E 00	8.0
2	2	559.00	29267.	1138.	1.86	1118.35	1107	33	4.878E 01	0.6
3	2	563.97	100323.	874.	1.84	1128.27	1107	33	1.672E 02	0.3
4	1	602.63	5932.	776.	1.85	1205.53	1198	16	9.887E 00	1.5
5	1	645.81	318.	850.	2.05	1291.81	1281	17	5.305E-01	14.1
6	1	657.01	3048.	548.	1.92	1314.21	1306	16	5.080E 00	2.1
7	1	665.45	176.	494.	2.25	1331.08	1325	13	2.937E-01	19.4

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 9:54:33 AM \*\*\*\*\*  
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91119065 QY.RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00

SAMPLE IDENTIFICATION: 0224H

TYPE OF SAMPLE: UNKNOWN

SAMPLE QUANTITY: 8409.000

UNITS: UG

SAMPLE GEOMETRY: AFFRI 5S INCOR

EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*

ACQUISITION DATE: 11JAN80 1808:49 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 625. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.9	3683.	1045.	0.0134	0.0012	8.8
%-ANTIMONY	564.0	1520.	137680.	0.8511	0.0027	0.3
%-ARSENIC	657.0	354.	4416.	0.2333	0.0066	2.8

1009:	264.	262.	248.	259.	261.	252.	245.	261.	260.
1018:	278.	276.	307.	418.	378.	394.	349.	278.	288.
1027:	296.	230.	240.	245.	233.	235.	233.	208.	239.
1117:	7529.	10571.	10003.	6229.	2552.	985.	861.	1836.	4986.
1126:	13087.	25190.	34629.	32571.	18857.	6616.	1467.	323.	166.
1135:	159.	147.	139.	124.	133.	122.	143.	152.	128.
1301:	71.	84.	58.	59.	60.	61.	65.	72.	87.
1310:	108.	239.	511.	889.	1136.	1025.	584.	279.	92.
1319:	67.	72.	43.	59.	66.	56.	63.	54.	66.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.86	1045.	3683.	3.27	1022.13	1015	15	1.741E 00	8.8
2	2	558.99	41304.	1994.	1.85	1118.32	1110	31	6.884E 01	0.5
3	2	563.96	137680.	1520.	1.85	1128.25	1110	31	2.295E 02	0.3
4	1	602.62	8244.	1335.	1.86	1205.50	1197	17	1.374E 01	1.3
5	3	645.74	770.	494.	2.66	1291.69	1285	37	1.283E 00	5.4
6	3	656.97	4416.	354.	1.91	1314.13	1285	37	7.360E 00	1.6
7	1	665.13	246.	990.	1.93	1330.44	1324	15	4.106E-01	19.2



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 \*\*\*\*\* 14 JAN 1980 9:55:44 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 02241  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6837.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI SS INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1819:27 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	2984.	813.	0.0130	0.0013	10.2
%-ANTIMONY	564.0	925.	97178.	0.7403	0.0027	0.4
%-ARSENIC	657.0	819.	2959.	0.1931	0.0063	3.3

1009:	183.	180.	181.	186.	167.	165.	165.	162.	210.
1018:	203.	223.	256.	271.	333.	288.	274.	218.	188.
1027:	163.	199.	177.	166.	153.	160.	173.	149.	153.

1117:	5073.	7279.	7000.	4397.	1886.	712.	619.	1298.	3467.
1126:	9060.	17519.	24119.	22804.	13854.	4691.	1028.	181.	109.
1135:	86.	74.	76.	83.	74.	72.	81.	84.	61.

1301:	48.	33.	39.	42.	40.	45.	40.	59.	57.
1310:	74.	154.	342.	576.	767.	746.	399.	168.	71.
1319:	39.	29.	37.	39.	39.	45.	36.	36.	38.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.82	813.	2984.	2.60	1022.05	1015	18	1.354E 00	10.1
2	2	559.01	28694.	1282.	1.86	1118.37	1110	29	4.782E 01	0.6
3	2	563.97	97178.	925.	1.86	1128.27	1110	29	1.620E 02	0.3
4	1	602.63	5552.	804.	1.83	1205.54	1198	16	9.254E 00	1.5
5	1	645.91	429.	712.	2.18	1292.03	1285	16	7.149E-01	10.0
6	1	657.00	2959.	819.	1.86	1314.19	1303	21	4.932E 00	2.3
7	1	665.43	125.	620.	1.93	1331.04	1324	14	2.091E-01	29.4



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 \*\*\*\*\* 14 JAN 1980 9:56:57 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1346:00  
 SAMPLE IDENTIFICATION: 0224J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8286.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1829:58 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	2547.	944.	0.00126	0.0010	8.3
%-ANTIMONY	564.0	1106.	119804.	0.7544	0.0025	0.3
%-ARSENIC	657.0	672.	3748.	0.2028	0.0061	3.0

1009:	235.	232.	228.	210.	213.	250.	255.	223.	217.
1010:	263.	257.	280.	356.	364.	344.	345.	284.	210.
1027:	203.	197.	212.	205.	209.	202.	202.	194.	199.
1117:	6160.	8800.	8393.	5335.	2186.	819.	768.	1500.	4326.
1126:	11116.	21969.	30215.	28272.	16556.	5795.	1186.	247.	135.
1135:	132.	108.	108.	121.	99.	99.	118.	122.	100.
1301:	51.	54.	60.	57.	37.	40.	52.	63.	60.
1310:	111.	210.	414.	749.	922.	832.	551.	208.	68.
1319:	48.	45.	45.	46.	44.	49.	47.	40.	51.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	944.	2547.	2.97	1022.41	1017	12	1.574E 00	8.2
2	2	559.00	35066.	1383.	1.88	1118.34	1107	34	5.844E 01	0.6
3	2	563.96	119804.	1106.	1.84	1128.25	1107	34	1.997E 02	0.3
4	1	602.63	6991.	1872.	1.86	1205.53	1198	26	1.165E 01	1.5
5	1	645.75	514.	714.	2.34	1291.70	1284	14	8.569E-01	8.6
6	1	656.98	3748.	672.	1.99	1314.15	1306	16	6.246E 00	1.9
7	1	665.20	242.	509.	2.10	1330.58	1326	11	4.028E-01	14.7

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 \*\*\*\*\* 14 JAN 1980 9:58:11 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q224K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8086.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1840:32 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 632. SEC \* SHAPE PARAMETER: 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	4913.	866.	0.0119	0.0014	12.0
%-ANTIMONY	564.0	1896.	181917.	1.1761	0.0033	0.3
%-ARSENIC	657.0	1388.	5602.	0.3120	0.0088	2.8

1009:	337.	360.	349.	320.	351.	312.	336.	345.	348.
1010:	354.	379.	399.	454.	495.	484.	433.	413.	361.
1027:	340.	336.	311.	319.	312.	331.	303.	339.	276.
1117:	9854.	13886.	13414.	8307.	3475.	1305.	1215.	2392.	6718.
1126:	17142.	33481.	45615.	42718.	25140.	8826.	1937.	424.	277.
1135:	213.	231.	202.	205.	181.	203.	176.	216.	199.
1301:	102.	81.	101.	79.	104.	89.	102.	99.	105.
1310:	152.	307.	651.	1170.	1487.	1320.	788.	365.	129.
1319:	88.	94.	83.	71.	85.	93.	83.	83.	111.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	511.00	866.	4913.	2.53	1022.42	1014	15	1.444E 00	11.9
2	2	559.00	55375.	2284.	1.88	1118.34	1108	34	9.229E 01	0.4
3	2	563.96	181917.	1896.	1.85	1128.24	1108	34	3.032E 02	0.2
4	1	602.62	10760.	2667.	1.86	1205.50	1194	22	1.793E 01	1.2
5	1	645.67	728.	1388.	2.18	1291.54	1285	15	1.213E 00	8.1
6	1	656.98	5602.	1388.	1.88	1314.14	1306	16	9.336E 00	1.6
7	1	665.23	360.	1151.	2.23	1330.64	1325	13	5.997E-01	14.3

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 \*\*\*\*\* 14 JAN 1980 9:59:22 AM \*\*\*\*\*  
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91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7003.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1851:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 617. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.6	2496.	699.	0.0112	0.0012	10.8
%-ANTIMONY	564.0	1029.	97152.	0.7266	0.0026	0.4
%-ARSENIC	657.0	703.	3098.	0.2002	0.0053	3.2

1009:	167.	171.	177.	188.	177.	187.	176.	166.	205.
1018:	221.	245.	262.	306.	302.	274.	244.	218.	190.
1027:	185.	165.	185.	165.	149.	159.	162.	138.	146.
1117:	4939.	7067.	7248.	4438.	1768.	657.	611.	1215.	3412.
1126:	8939.	17544.	24549.	22804.	13882.	4659.	974.	192.	108.
1135:	83.	80.	66.	87.	66.	70.	76.	91.	105.
1301:	51.	43.	44.	41.	43.	47.	38.	51.	57.
1310:	85.	172.	323.	619.	804.	686.	469.	180.	71.
1319:	37.	34.	35.	30.	34.	30.	35.	28.	36.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.57	699.	2496.	2.67	1021.55	1015	14	1.165E 00	10.8
2	2	559.03	28785.	1219.	1.86	1118.39	1107	47	4.797E 01	0.6
3	2	563.97	97152.	1029.	1.84	1128.27	1107	47	1.619E 02	0.3
4	1	602.63	5663.	888.	1.86	1205.54	1198	16	9.439E 00	1.5
5	1	645.72	375.	537.	1.87	1291.64	1286	12	6.245E-01	10.2
6	1	657.00	3098.	703.	1.93	1314.18	1305	19	5.163E 00	2.2
7	1	665.25	242.	338.	2.40	1330.68	1326	10	4.039E-01	12.5

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 \*\*\*\*\* 14 JAN 1980 10:00:35 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224M  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6525.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1901:48 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.7	3045.	547.	0.0095	0.0014	14.9
%-ANTIMONY	564.0	973.	114291.	0.9191	0.0031	0.3
%-ARSENIC	657.0	936.	3444.	0.2399	0.0075	3.1

1009:	237.	184.	188.	230.	185.	212.	217.	199.	253.
1018:	226.	228.	285.	284.	306.	295.	266.	232.	226.
1027:	193.	207.	208.	203.	210.	179.	191.	182.	158.
1117:	5855.	8184.	8231.	5068.	2148.	823.	646.	1417.	3868.
1126:	10333.	20383.	28363.	27048.	16537.	5736.	1228.	209.	131.
1135:	100.	100.	93.	105.	92.	105.	98.	106.	105.
1301:	42.	38.	44.	68.	46.	49.	56.	64.	81.
1310:	83.	190.	366.	718.	854.	846.	502.	235.	85.
1319:	51.	50.	46.	46.	48.	38.	53.	47.	49.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.69	547.	3045.	2.54	1021.79	1014	15	9.111E-01	14.9
2	2	559.02	33410.	1269.	1.88	1118.37	1108	30	5.568E 01	0.6
3	2	563.99	114291.	973.	1.86	1128.30	1108	30	1.905E 02	0.3
4	1	602.64	6528.	1573.	1.82	1205.56	1194	26	1.088E 01	1.5
5	1	645.82	428.	1150.	1.99	1291.84	1284	21	7.131E-01	12.2
6	1	657.01	3444.	936.	1.90	1314.22	1305	18	5.739E 00	2.1
7	1	665.28	221.	595.	2.34	1330.74	1324	13	3.691E-01	17.0

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 \*\*\*\*\* 14 JAN 1980 10:01:47 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q224N  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7827.000  
 SAMPLE GEOMETRY: AFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

UNITS: UG

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1912:22 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 624. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	3003.	860.	0.0126	0.0012	9.7
%-ANTIMONY	564.0	1487.	132828.	0.8922	0.0028	0.3
%-ARSENIC	657.0	788.	4155.	0.2424	0.0071	2.9

1009:	235.	252.	241.	250.	241.	265.	248.	233.	241.
1018:	240.	287.	301.	372.	353.	372.	373.	297.	261.
1027:	222.	254.	232.	218.	236.	230.	227.	227.	227.
1117:	6923.	10034.	9994.	6179.	2662.	981.	896.	1553.	4610.
1126:	11894.	23493.	33070.	32044.	19199.	6865.	1508.	286.	153.
1135:	148.	139.	112.	116.	121.	150.	130.	122.	136.
1301:	66.	64.	77.	71.	73.	72.	60.	65.	72.
1310:	114.	214.	448.	817.	1087.	982.	606.	288.	100.
1319:	50.	44.	49.	55.	78.	43.	42.	55.	61.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	FW	CTS/SEC	%ERR
1	1	511.04	860.	3003.	2.68	1022.49	1017	13	1.433E 00	9.6
2	2	559.03	39845.	1954.	1.85	1118.40	1110	30	6.641E 01	0.5
3	2	563.99	132828.	1487.	1.84	1128.31	1110	30	2.214E 02	0.3
4	1	602.65	7652.	1759.	1.81	1205.57	1197	21	1.275E 01	1.4
5	1	645.60	474.	904.	2.10	1291.40	1285	15	7.898E-01	10.1
6	1	657.02	4155.	788.	1.90	1314.22	1307	14	6.924E 00	1.8
7	1	665.22	198.	714.	2.11	1330.61	1326	12	3.294E-01	20.4

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 \*\*\*\*\* 14 JAN 1980 10:02:56 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 02240  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6910.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1923:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 726. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	17844.	0. <	0.00105	NOT DETECTABLE	
%-ANTIMONY	563.9	10627.	634785.	4.8393	0.0097	0.2
%-ARSENIC	656.9	9306.	19505.	1.2958	0.0326	2.5

1009: 1452.	1407.	1399.	1436.	1363.	1357.	1361.	1347.	1383.
1018: 1337.	1347.	1424.	1448.	1431.	1451.	1395.	1333.	1360.
1027: 1281.	1307.	1308.	1259.	1307.	1271.	1290.	1279.	1249.
1117:36118.	46448.	42498.	25714.	10880.	5238.	5492.	11123.	29461.
1126:69281.	123424.	157289.	139352.	79631.	28972.	7903.	3268.	2445.
1135: 2221.	1949.	1773.	1753.	1700.	1527.	1538.	1513.	1497.
1301: 535.	544.	550.	506.	554.	546.	569.	573.	640.
1310: 868.	1495.	2773.	4400.	5048.	4554.	2783.	1377.	722.
1319: 590.	579.	507.	505.	514.	516.	510.	519.	562.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	558.92	185971.	10589.	1.94	1118.18	1107	35	3.100E 02	0.2
2	2	563.88	634785.	10627.	1.91	1128.10	1107	35	1.058E 03	0.1
3	1	602.56	37142.	13579.	1.95	1205.39	1197	17	6.190E 01	0.7
4	1	645.64	2447.	8636.	2.12	1291.48	1284	15	4.078E 00	5.7
5	1	656.91	19505.	9306.	1.98	1314.01	1304	18	3.251E 01	1.0
6	1	665.17	1041.	5706.	1.93	1330.52	1326	11	1.735E 00	10.7

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 \*\*\*\*\* 14 JAN 1980 10:04:08 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224P  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6541.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1935:18 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.8	2472.	590.	0.00105	0.0013	12.7
Z-ANTIMONY	564.0	936.	112744.	0.9098	0.0031	0.3
Z-ARSENIC	657.0	359.	3434.	0.2422	0.0072	3.0

1009:	207.	224.	193.	204.	214.	214.	207.	209.	202.
1018:	205.	258.	291.	298.	300.	309.	274.	256.	201.
1027:	195.	213.	167.	215.	195.	193.	181.	171.	201.
1117:	5891.	8454.	7999.	4788.	1977.	794.	705.	1538.	4181.
1126:	10855.	20385.	28300.	26541.	15313.	5241.	1122.	221.	132.
1135:	95.	98.	101.	102.	103.	105.	91.	110.	108.
1301:	50.	53.	44.	44.	47.	42.	69.	65.	51.
1310:	97.	177.	401.	708.	921.	825.	477.	207.	75.
1319:	42.	54.	41.	48.	37.	41.	34.	36.	57.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.76	590.	2472.	2.55	1021.94	1016	12	9.826E-01	12.6
2	2	558.99	33166.	1219.	1.86	1118.31	1107	30	5.528E 01	0.6
3	2	563.96	112744.	936.	1.85	1128.24	1107	30	1.879E 02	0.3
4	1	602.62	6707.	1469.	1.81	1205.50	1195	26	1.118E 01	1.5
5	1	645.80	464.	651.	2.09	1291.80	1286	12	7.732E-01	9.1
6	4	656.98	3434.	359.	1.85	1314.14	1302	36	5.723E 00	1.9
7	4	665.30	180.	409.	2.07	1330.77	1302	36	2.997E-01	17.6



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 \*\*\*\*\* 14 JAN 1980 10:05:18 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q2240  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6272.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1945:52 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 712. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	15843.	0. <	0.0111.	NOT DETECTABLE	
%-ANTIMONY	563.9	9035.	563815.	4.7545	0.0098	0.2
%-ARSENIC	656.9	7184.	17648.	1.3046	0.0329	2.5

1009: 1263.	1283.	1215.	1203.	1209.	1246.	1244.	1189.	1188.
1018: 1227.	1282.	1177.	1283.	1326.	1239.	1225.	1189.	1214.
1027: 1154.	1150.	1144.	1175.	1090.	1136.	1057.	1094.	1116.
1117: 32492.	42403.	38756.	23361.	9775.	4593.	4617.	9603.	25481.
1126: 60733.	109514.	141121.	124537.	71044.	25445.	6748.	2674.	1965.
1135: 1737.	1598.	1420.	1344.	1259.	1273.	1264.	1257.	1187.
1301: 467.	491.	479.	441.	451.	465.	451.	463.	538.
1310: 772.	1309.	2444.	3955.	4771.	4091.	2508.	1172.	584.
1319: 450.	466.	448.	432.	438.	439.	449.	416.	476.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	558.93	168607.	9192.	1.92	1118.19	1107	35	2.810E 02	0.3
2	2	563.89	563815.	9035.	1.90	1128.11	1107	35	9.397E 02	0.1
3	1	602.55	32665.	12222.	1.89	1205.37	1197	19	5.444E 01	0.7
4	1	638.67	305.	5383.	1.78	1277.54	1274	10	5.087E-01	34.5
5	1	645.67	1987.	6546.	1.87	1291.54	1285	13	3.312E 00	6.2
6	1	656.91	17648.	7184.	1.93	1314.01	1306	16	2.941E 01	1.0
7	1	665.24	947.	4909.	1.82	1330.65	1326	11	1.578E 00	11.0



\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 10:06:31 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: Q224R  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6018.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 1957:59 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 615. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.5	2258.	638.	0.0127	0.0014	11.3
Z-ANTIMONY	564.0	757.	82522.	0.7267	0.0028	0.4
Z-ARSENIC	657.0	514.	2473.	0.1915	0.0064	3.3

1009:	173.	168.	143.	145.	138.	165.	152.	136.	183.
1018:	161.	191.	231.	256.	262.	238.	208.	178.	160.
1027:	156.	163.	159.	156.	145.	160.	122.	153.	132.
1117:	4169.	5950.	5824.	3663.	1523.	543.	484.	1034.	2824.
1126:	7477.	14680.	20298.	19829.	11822.	4265.	851.	174.	83.
1135:	69.	62.	62.	56.	66.	73.	85.	77.	87.
1301:	33.	29.	38.	29.	33.	34.	37.	37.	42.
1310:	66.	124.	270.	492.	651.	595.	345.	145.	58.
1319:	34.	30.	30.	29.	33.	40.	28.	27.	37.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.47	638.	2258.	2.93	1021.34	1013	15	1.064E 00	11.2
2	2	559.02	23718.	898.	1.85	1118.38	1107	35	3.953E 01	0.7
3	2	563.99	82522.	757.	1.86	1128.30	1107	35	1.375E 02	0.4
4	1	602.65	4925.	861.	1.91	1205.57	1195	21	8.209E 00	1.7
5	1	638.82	83.	528.	2.25	1277.86	1274	11	1.388E-01	40.5
6	1	645.79	356.	507.	1.91	1291.78	1286	12	5.932E-01	10.4
7	1	657.00	2473.	514.	1.86	1314.18	1305	17	4.122E 00	2.4
8	1	665.39	170.	402.	2.13	1330.96	1326	11	2.836E-01	18.3

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 \*\*\*\*\* 14 JAN 1980 10:07:44 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224S  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7364.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCON  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2008:25 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 621. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLFRANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1. SIGMA ERROR	%ERROR
%-COPPER	510.7	3429.	1073.	0.0176	0.0015	8.4
%-ANTIMONY	564.0	1134.	113594.	0.8190	0.0028	0.3
%-ARSENIC	657.0	840.	3255.	0.2069	0.0065	3.2

1009:	223.	209.	184.	185.	205.	221.	202.	205.	239.
1010:	264.	232.	298.	309.	337.	347.	291.	251.	226.
1027:	196.	215.	187.	206.	188.	192.	173.	187.	210.
1117:	5726.	8252.	8038.	5032.	2018.	801.	659.	1377.	3964.
1126:	10460.	20392.	28098.	27034.	16170.	5664.	1223.	253.	131.
1135:	135.	113.	102.	107.	103.	98.	94.	109.	103.
1301:	50.	53.	59.	49.	43.	45.	63.	55.	60.
1310:	96.	155.	367.	681.	813.	767.	461.	198.	71.
1319:	55.	48.	49.	53.	57.	35.	41.	42.	57.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.71	1073.	3429.	3.62	1021.83	1012	10	1.789E 00	8.3
2	2	559.02	32557.	1404.	1.85	1118.37	1108	35	5.426E 01	0.6
3	2	563.98	113594.	1134.	1.85	1128.29	1108	35	1.893E 02	0.3
4	1	602.65	7043.	1080.	1.88	1205.56	1196	17	1.174E 01	1.4
5	1	645.73	499.	868.	2.19	1291.66	1285	16	8.309E-01	9.5
6	1	656.98	3255.	840.	1.91	1314.16	1305	20	5.425E 00	2.2
7	1	665.15	268.	443.	2.37	1330.47	1325	11	4.459E-01	12.7

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 \*\*\*\*\* 14 JAN 1980 10:08:53 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 0224T  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 5340.000 UNITS: UG  
 SAMPLE GEOMETRY: AFR1 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2019:00 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 697. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	13446.	0. <	0.0124	NOT DETECTABLE	
%-ANTIMONY	563.9	7447.	501925.	5.0005	0.0105	0.2
%-ARSENIC	656.9	5381.	15100.	1.3302	0.0338	2.5

1009: 1107.	1092.	1104.	1028.	998.	1031.	966.	1060.	1025.
1018: 1064.	966.	1049.	1064.	1091.	1025.	1045.	1027.	1070.
1027: 979.	981.	954.	976.	932.	955.	972.	984.	980.
1117:27372.	36580.	34406.	21090.	8965.	3892.	3949.	7936.	20917.
1126:51935.	94979.	125365.	113247.	65800.	23596.	6050.	2210.	1578.
1135: 1406.	1219.	1175.	1148.	1007.	1021.	1050.	996.	974.
1301: 342.	353.	376.	410.	399.	393.	345.	413.	422.
1310: 610.	1071.	1952.	3297.	4141.	3545.	2154.	1062.	462.
1319: 380.	363.	333.	364.	353.	348.	322.	335.	380.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	558.96	146324.	7659.	1.91	1118.26	1107	35	2.439E 02	0.3
2	2	563.92	501925.	7447.	1.89	1128.16	1107	35	8.365E 02	0.1
3	1	602.59	29765.	9432.	1.89	1205.45	1196	18	4.961E 01	0.7
4	1	645.66	1548.	6101.	1.85	1291.53	1283	15	2.580E 00	7.6
5	1	656.94	15100.	5381.	1.91	1314.07	1307	15	2.517E 01	1.1
6	1	665.14	923.	3795.	1.94	1330.45	1325	11	1.538E 00	10.0

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 10:10:03 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S626D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11377.00 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2030:49 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 622. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

\*\*\*\*\*  
 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL. LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

\*\*\*\*\*

# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	4631.	7390.	0.0799	0.0016	2.1
%-ANTIMONY	564.0	1057.	160738.	0.7531	0.0022	0.3
%-ARSENIC	657.4	597.	0. <	0.0048	NOT DETECTABLE	

1009:	245.	265.	227.	233.	254.	261.	276.	322.	366.
1018:	521.	724.	1030.	1379.	1516.	1345.	1101.	827.	559.
1027:	387.	286.	254.	222.	196.	209.	213.	198.	191.
1117:	433.	523.	539.	570.	490.	592.	847.	1773.	5343.
1126:14002.	28442.	40296.	38469.	23418.	8361.	1682.	314.	146.	
1135:	136.	123.	110.	114.	106.	104.	111.	81.	98.
1301:	36.	64.	51.	41.	50.	41.	38.	39.	38.
1310:	45.	38.	56.	50.	61.	64.	34.	53.	56.
1319:	33.	35.	34.	43.	45.	39.	49.	31.	31.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PM	CTS/SEC	%ERR
1	1	510.85	7390.	4631.	2.77	1022.11	1012	21	1.232E 01	1.7
2	2	560.27	1643.	1442.	2.12	1120.87	1108	31	2.739E 00	4.1
3	2	563.99	160738.	1057.	1.84	1128.32	1108	31	2.679E 02	0.3
4	1	602.65	9159.	1109.	1.84	1205.58	1196	17	1.527E 01	1.2
5	1	645.83	652.	837.	1.91	1291.86	1286	17	1.086E 00	7.4

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 10:11:16 AM \*\*\*\*\*  
 \*\*\*\*\*

91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 11:46:00  
 SAMPLE IDENTIFICATION: S626F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9345.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2041:23 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 618. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.8	4272.	5748.	0.0764	0.0018	2.4
Z-ANTIMONY	564.0	4169.	127964.	0.7313	0.0024	0.3
Z-ARSENIC	657.2	333.	96.	0.0049	0.0014	28.9

1009:	186.	171.	178.	182.	197.	214.	203.	249.	294.
1018:	401.	605.	824.	1055.	1133.	1133.	876.	635.	395.
1027:	285.	243.	174.	177.	173.	167.	156.	172.	191.
1117:	387.	405.	404.	424.	446.	512.	662.	1443.	4107.
1126:11209.	22392.	32183.	31171.	19021.	6797.	1341.	241.	105.	
1135:	105.	75.	78.	79.	72.	62.	70.	71.	65.
1301:	40.	28.	34.	31.	32.	35.	34.	31.	28.
1310:	48.	25.	32.	51.	57.	50.	50.	35.	24.
1319:	26.	35.	25.	39.	28.	32.	32.	38.	37.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.84	5748.	4272.	2.76	1022.09	1011	24	9.581E 00	2.1
2	1	564.01	127964.	4169.	1.83	1128.34	1120	17	2.133E 02	0.3
3	1	602.66	7403.	990.	1.85	1205.60	1194	22	1.234E 01	1.3
4	1	645.86	458.	522.	1.74	1291.92	1286	14	7.640E-01	8.5
5	1	657.23	96.	333.	2.02	1314.65	1311	10	1.597E-01	28.8

\*\*\*\*\*  
 \*\*\*\*\* 14 JAN 1980 10:12:27 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S626F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 11253.00 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: FFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2051:54 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 620. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	5207.	6939.	0.0773	0.0017	2.2
%-ANTIMONY	564.0	1082.	143267.	0.6812	0.0021	0.3
%-ARSENIC	657.4	579.	0. <	0.0049	NOT DETECTABLE	

1009:	208.	226.	201.	226.	233.	214.	256.	288.	343.
1018:	474.	710.	999.	1199.	1414.	1292.	1012.	785.	493.
1027:	354.	260.	198.	201.	148.	188.	183.	164.	179.
1117:	372.	470.	508.	467.	445.	512.	768.	1542.	4640.
1126:12543.	25129.	35753.	34656.	21024.	7305.	1605.	243.	123.	
1135:	113.	99.	89.	75.	85.	90.	87.	72.	69.
1301:	45.	49.	51.	45.	38.	33.	26.	31.	39.
1310:	36.	44.	44.	53.	49.	60.	45.	42.	49.
1319:	29.	51.	38.	34.	32.	28.	39.	34.	42.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.85	6939.	5207.	2.80	1022.11	1011	26	1.156E 01	1.9
2	2	560.07	1392.	1433.	2.11	1120.48	1109	45	2.319E 00	4.7
3	2	564.00	143267.	1082.	1.83	1128.33	1109	45	2.388E 02	0.3
4	1.	602.68	8667.	1326.	1.84	1205.62	1194	24	1.444E 01	1.2
5	1.	645.79	623.	688.	2.05	1291.78	1284	16	1.039E 00	7.2

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 \*\*\*\*\* 14 JAN 1980 10:13:34 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S604D  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 10231.00 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2102:28 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 652. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	511.0	7365.	0. <	0.0050	NOT DETECTABLE	
%-ANTIMONY	564.0	3027.	353887.	1.8543	0.0043	0.2
%-ARSENIC	657.0	1855.	2094.	0.0981	0.0042	4.3

1009:	542.	560.	520.	585.	536.	542.	532.	518.	538.
1018:	572.	555.	581.	645.	613.	613.	630.	545.	539.
1027:	499.	517.	464.	487.	503.	485.	497.	492.	476.

1117:	4192.	5724.	5857.	3910.	2185.	1681.	2207.	4234.	12477.
1126:	32829.	63905.	87632.	82772.	50271.	17930.	4214.	1007.	640.
1135:	516.	459.	423.	448.	398.	349.	365.	366.	340.

1301:	161.	146.	144.	127.	139.	135.	140.	140.	130.
1310:	154.	218.	351.	536.	657.	582.	406.	224.	155.
1319:	118.	149.	128.	122.	135.	134.	160.	111.	121.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.08	24276.	3836.	2.14	1118.49	1107	35	4.046E 01	0.7
2	2	563.97	353887.	3027.	1.87	1128.27	1107	35	5.898E 02	0.2
3	1	602.64	20757.	4085.	1.85	1205.54	1195	19	3.459E 01	0.8
4	1	645.70	1432.	2258.	2.11	1291.61	1285	15	2.387E 00	5.4
5	1	656.98	2094.	1855.	1.89	1314.14	1308	14	3.490E 00	3.6

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 \*\*\*\*\* 14 JAN 1980 10:14:42 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S604E  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7303.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFRI 5S INCUR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2113:34 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 635. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GELI-0 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	4811.	0. <	0.0057	NOT DETECTABLE	
Z-ANTIMONY	564.0	1908.	240710.	1.7704	0.0046	0.3
Z-ARSENIC	657.0	1232.	1493.	0.0985	0.0047	4.8

1009:	364.	356.	377.	363.	387.	378.	346.	349.	346.
1018:	346.	397.	385.	403.	409.	419.	397.	357.	328.
1027:	349.	326.	323.	307.	338.	328.	325.	332.	321.
1117:	2949.	4048.	4032.	2817.	1535.	1048.	1374.	2834.	8145.
1126:	21313.	42439.	60055.	57179.	34835.	12751.	2624.	557.	293.
1135:	248.	229.	205.	217.	206.	188.	191.	199.	169.
1301:	79.	85.	68.	88.	77.	73.	78.	82.	89.
1310:	92.	125.	230.	344.	467.	389.	283.	155.	93.
1319:	104.	62.	64.	76.	81.	70.	70.	82.	75.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.08	16697.	2618.	2.07	1118.49	1108	34	2.783E 01	0.9
2	2	563.99	240710.	1908.	1.85	1128.31	1108	34	4.012E 02	0.2
3	1	602.66	14790.	1971.	1.91	1205.58	1195	18	2.465E 01	0.9
4	1	645.87	973.	1454.	1.89	1291.94	1285	17	1.621E 00	6.4
5	1	657.00	1493.	1232.	1.88	1314.19	1307	16	2.489E 00	4.2



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 \*\*\*\*\* 14 JAN 1980 10:15:54 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S604F  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 6894.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2124:20 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 634. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	511.0	4766.	0. <	0.0061	NOT DETECTABLE	
Z-ANTIMONY	564.0	1988.	242090.	1.8897	0.0048	0.3
Z-ARSENIC	657.0	1211.	1489.	0.1045	0.0050	4.8

1009:	337.	375.	369.	343.	370.	372.	354.	346.	371.
1018:	354.	355.	401.	379.	410.	391.	370.	338.	365.
1027:	365.	321.	315.	332.	304.	357.	346.	335.	321.
1117:	2837.	3962.	3822.	2797.	1514.	1101.	1393.	2796.	8318.
1126:	21618.	42949.	59936.	57433.	35310.	12894.	2698.	615.	299.
1135:	269.	256.	237.	225.	184.	160.	200.	210.	206.
1301:	74.	74.	78.	86.	94.	72.	96.	91.	91.
1310:	105.	136.	254.	348.	437.	395.	275.	137.	82.
1319:	66.	84.	73.	89.	66.	75.	88.	59.	70.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	2	559.08	16336.	2671.	2.12	1118.50	1108	35	2.723E 01	0.9
2	2	563.99	242090.	1988.	1.86	1128.31	1108	35	4.035E 02	0.2
3	1	602.66	14361.	2274.	1.83	1205.58	1196	17	2.393E 01	1.0
4	1	645.80	1061.	1665.	2.05	1291.81	1284	20	1.768E 00	6.2
5	1	656.97	1489.	1211.	1.98	1314.13	1306	15	2.481E 00	4.2

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 \*\*\*\*\* 14 JAN 1980 10:17:00 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S626J  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 8982.000  
 SAMPLE GEOMETRY: AFFRI 55 INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

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 \*  
 ACQUISITION DATE: 11JAN80 2135:06 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	3498.	4847.	0.0703	0.0018	2.5
Z-ANTIMONY	564.0	663.	119606.	0.7179	0.0024	0.3
Z-ARSENIC	657.4	387.	0. <	0.0051	NOT DETECTABLE	

1009:	170.	156.	174.	165.	180.	157.	184.	202.	273.
1018:	329.	493.	678.	926.	974.	925.	765.	558.	387.
1027:	275.	206.	174.	150.	157.	115.	145.	152.	143.
1117:	332.	376.	387.	427.	392.	417.	620.	1260.	3783.
1126:10207.	20626.	29989.	29124.	17542.	6417.	1324.	238.	79.	
1135:	78.	69.	67.	61.	56.	62.	59.	61.	69.
1301:	36.	28.	22.	30.	32.	22.	32.	28.	29.
1310:	19.	24.	35.	43.	38.	30.	33.	37.	27.
1319:	17.	27.	28.	28.	26.	39.	22.	17.	22.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.88	4847.	3498.	2.77	1022.17	1012	22	8.079E 00	2.2
2	2	560.15	1237.	946.	2.12	1120.62	1108	29	2.062E 00	4.5
3	2	564.01	119606.	663.	1.83	1128.35	1108	29	1.993E 02	0.3
4	1	602.66	4081.	574.	1.83	1205.58	1197	17	6.802E 00	1.8
5	1	645.81	256.	427.	2.09	1291.82	1284	14	4.269E-01	13.0

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 \*\*\*\*\* 14 JAN 1980 10:18:11 AM \*\*\*\*\*  
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91119065 QY, RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: S626K  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 7574.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2145:36 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 613. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
Z-COPPER	510.9	2833.	4372.	0.0759	0.0019	2.5
Z-ANTIMONY	564.0	681.	102086.	0.7280	0.0026	0.4
Z-ARSENIC	657.4	335.	0. <	0.0057	NOT DETECTABLE	

1009:	137.	123.	131.	139.	154.	120.	146.	188.	194.
1018:	333.	447.	575.	766.	843.	846.	689.	462.	305.
1027:	239.	161.	119.	121.	114.	121.	132.	113.	116.
1117:	237.	335.	358.	302.	330.	366.	533.	1124.	3220.
1126:	8699.	17579.	25446.	24919.	15146.	5321.	1091.	162.	79.
1135:	55.	59.	57.	46.	33.	37.	54.	44.	46.
1301:	19.	19.	20.	31.	27.	16.	24.	29.	17.
1310:	17.	28.	28.	37.	26.	32.	24.	30.	22.
1319:	23.	23.	28.	14.	21.	15.	20.	20.	21.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.88	4372.	2833.	2.84	1022.16	1012	22	7.286E 00	2.3
2	2	560.21	994.	994.	2.11	1120.76	1111	31	1.657E 00	5.5
3	2	564.01	102086.	681.	1.83	1128.35	1111	31	1.701E 02	0.3
4	1	602.67	3481.	938.	1.83	1205.60	1198	28	5.802E 00	2.1
5	1	645.80	241.	383.	1.86	1291.81	1284	15	4.017E-01	13.2

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 \*\*\*\*\* 14 JAN 1980 10:19:21 AM \*\*\*\*\*  
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91119065 QY,RF FIFTH IRRADIATION PART TWO

SAMPLE DATE: 10JAN80 1146:00  
 SAMPLE IDENTIFICATION: 5626L  
 TYPE OF SAMPLE: UNKNOWN  
 SAMPLE QUANTITY: 9076.000 UNITS: UG  
 SAMPLE GEOMETRY: AFFR1 5S INCOR  
 EFFICIENCY FILE NAME: EFF.TAB1

\*\*\*\*\*  
 \*  
 ACQUISITION DATE: 11JAN80 2156:02 \* FWHM(1332) 2.390  
 PRESET TIME(LIVE): 600. SEC \* SENSITIVITY: 5.000  
 ELAPSED REAL TIME: 616. SEC \* SHAPE PARAMETER : 15.0 %  
 ELAPSED LIVE TIME: 600. SEC \* NBR ITERATIONS: 10.  
 \*

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 \*  
 DETECTOR: GEL1-8 \* LIBRARY:NUCL.LIB1  
 DATE CALIBRATED: 26OCT79 1434:06 \* ENERGY TOLERANCE: 2.000KV  
 KEV/CHNL: 0.5003803 \* HALF LIFE RATIO: 8.00  
 OFFSET: -0.5932283 KEV \* ABUNDANCE LIMIT: 85.00%  
 \*

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# UNKNOWN SAMPLE REPORT

ELEMENT	PEAK ENERGY	BKGND	AREA	CONCENTR.	1 SIGMA ERROR	%ERROR
%-COPPER	510.8	4984.	5125.	0.0750	0.0020	2.6
%-ANTIMONY	564.0	4137.	118764.	0.7081	0.0024	0.3
%-ARSENIC	657.4	368.	0. <	0.0050	NOT DETECTABLE	

1009:	155.	164.	170.	170.	173.	205.	176.	227.	277.
1018:	382.	516.	763.	942.	974.	940.	774.	568.	381.
1027:	261.	178.	130.	155.	148.	124.	146.	122.	128.
1117:	307.	349.	384.	371.	354.	480.	628.	1296.	3717.
1126:10328.	21178.	29798.	28897.	17550.	6348.	1309.	199.	105.	
1135:	86.	60.	59.	52.	64.	59.	59.	63.	53.
1301:	16.	28.	19.	31.	25.	31.	34.	16.	18.
1310:	24.	22.	29.	32.	37.	42.	40.	31.	24.
1319:	25.	13.	31.	22.	28.	27.	21.	26.	22.

PULSE-PILE-UP CORRECTED DATA. CORRECTION = 1.000

PK	IT	ENERGY	AREA	BKGND	FWHM	CHANNEL	LEFT	PW	CTS/SEC	%ERR
1	1	510.82	5125.	4984.	2.88	1022.06	1011	32	8.542E 00	2.4
2	1	564.00	118764.	4137.	1.82	1128.34	1120	19	1.979E 02	0.3
3	1	602.67	4358.	567.	1.87	1205.62	1196	18	7.264E 00	1.7
4	1	645.84	341.	376.	2.37	1291.89	1286	16	5.687E-01	9.7